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ABSTRACT

In order to develop an experiential learning curriculum for interdisciplinary social sciences that would take into account the needs and interests of students at Miami-Dade Community College, a review of the literature was undertaken in the following areas: philosophy and experiential learning theory; the role of the teacher; student characteristics as determinants of learning success; student characteristics important to the experiential instructor; the methods and conditions of learning preferred by community college students; learning styles and teaching styles; and the use of behavioral objectives, individual instruction, and evaluation. Principal theorists included were John Dewey, James S. Coleman, R. M. Kolb, and Ron Stradsklev. Student characteristics were drawn from Miami-Dade institutional research. A proposed model for classroom teaching and evaluation concludes the study. An extensive bibliography and the proposed objectives and learning activities for an interdisciplinary social sciences course are appended. (RT)

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THE DEVELOPMENT OF AN EXPERIENTIAL APPROACH TO LEARNING IN THE COMMUNITY COLLEGE

GEORGE H. EMERSON

A MAJOR APPLIED RESEARCH PROJECT
PRESENTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF DOCTOR OF EDUCATION

NOVA UNIVERSITY

1976

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THE DEVELOPMENT OF AN EXPERIENTIAL APPROACH TO LEARNING IN THE COMMUNITY COLLEGE

By

GEORGE H. EMERSON

August, 1976

The needs, abilities and learning styles of community college students are extremely diverse, and different from those of students enrolled at four year institutions. It has become increasingly clear to many that the material presented in class must be more closely related to the needs, interests and learning styles of these students, both in the desired end-states and means of instruction.

It is particularly important to adapt curriculum and techniques of required, general education courses to the needs of community college students. The Social Science 101 Course at Miami-Dade Community College, a large urban community college, is such a course. It is the first of two semesters of required interdisciplinary, general education social science. The course materials are drawn mainly from the disciplines of Anthropology. Sociology and Psychology. Imparting information through lectures, has been the major teaching method, and communicating a body of theoretical constructs has been its goal. Many faculty members and students have expressed interest in re-evaluating teaching strategies as well as goals, with a view to providing the kind of social science program that would be better suited to the learning styles, needs and interests of the learner.

The goal of the present study was to prepare a model curriculum that would take into account the needs and interests of community college students and would also be based on the experiential philosophy of learning. Experiential learning is learning through methods that actively involve the student in experiences from which he identifies facts, makes generalizations and tests and examines these in further experiences. The experiences provided are based on goals that reflect the student's needs and interests.

The survey method was used to examine the issues raised in this study. Works of widely respected philosophers, theorists and practitioners of experiential education were examined and important theoretical and practical findings presented. Demographic data on student characteristics, preferred instructional methods, and results of attempts at matching methods to student preferences or other characteristics were obtained for both Miami-Dade Community College students and those attending other institutions. A variety of sources were consulted including reports of research and results of surveys conducted at Miami-Dade Community College - North Campus and other community colleges.

The Appendix of this study contains a model curriculum for general education social science that incorporates

the findings, theories and research discussed in this Major Applied Research Project regarding experiential education and the community college student. A plan for evaluation of the application of the curriculum is also presented.

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CHAPTER I

INTRODUCTION

Social science curriculum and instruction are moving in new directions. New understandings of what to teach, how to teach for particular types of learning objectives and student learning style are being sought. Of particular concern is the need for innovation in teaching in the community college. Students who enter the community college via the "open door" should not find themselves dissatisfied with the education they receive or else they will drop out and receive no further education. The form of instruction, orientation to subject matter, and type of student-teacher relationship, can no longer be planned primarily for students transferring to four-year institutions.

Universal education is forcing the instructor to adapt his teaching to different learning styles and to search for innovation in teaching styles. The often used expository method in which extensive reliance is placed on the lecture, and the goal of transmitting intact a body of knowledge, are being reevaluated. The need is now to provide the students with reasoning and truth-giving skills. What is sought is a general education, interdisciplinary, social science curriculum based on components that are theoretically suited and empirically tested to fit the learning styles and needs of a variety of students.

STATEMENT OF PURPOSE

The purpose of this project was to develop a curriculum plan for community college students taking the first semester of a two-semester general education, interdisciplinary, social science course. (SSS 101) This course would be taught to freshmen in an urban community college. Principles of experiential learning and research on preferred teaching methods were molded into a theoretically effective curriculum for the needs and background of community college students. (See STATEMENT OF BACKGROUND for a full discussion of experiential learning.)

STATEMENT OF BACKGROUND

Many believe that the community college, its curriculum and means of instruction are not providing an adequate education for its students and community. It is frequently mentioned that developmental needs of college freshmen are not being met, nor are taken advantage of in the course of instruction, and that modes of instruction are outdated and based against outcomes that go beyond acquisition of "knowledge."

For some students the traditional academic curriculum grading and teaching procedures are likely to further reinforce past failures. Cross (1971) found that these students were motivated by the desire to complete the degree or certificate, so they could work. They had high aspirations in relation to background, and came with different sociocultural value systems from those of the traditionally academically-successful student. He was oriented to authoritarian attitudes and did not demonstrate a large amount of intellectual independence. The student from this value orientation wants his problems clarified for him.

More attention was being given to student roles that do not relate to their needs. For example, Keniston (1970) noted three types of students: those who felt "excluded," those who saw themselves as "tenuously in," and those who were "solidly in." At the same time that student roles were being examined, to see if they were viable for the needs and expectations of today's student, the colleges were being called upon to provide, "...resources for higher need fulfillment and self development." (Richardson, 1972, page 67.)

Students were increasingly questioning what benefits they could derive from an education. Research indicated that their needs were not being adequately met. While degrees were plentiful, money for education was scarce. Career paths and life-styles other than those of students, were increasingly available. Do general education courses provide end-states that are personally meaningful and relevant -- such as improving self concept, interpersonal, or civic skills? Will the course be abstract and dull, remote from experiential learning -- learning through interaction with its environment?

It is not only the youth, but 40-60 percent of adults without children in the community that are seeking new learning. (Harlacher, 1969) They too are in need of a meaningful, education connected with a need for learning brought on by the explosion of knowledge and swift passage of roles, both due to impact of technology.

What is needed is increased involvement for the student and programs aimed at meeting the backgrounds, needs, abilities, and aspirations of the young adult and other students. Too often general education courses are set up in imitation of four-year institutions, adapted to the traditional, acceptable, clasical curriculum of the "college level" course. The subject matter of the curriculum is seen as more important than meeting the needs of the student.

The universities which have traditionally served as models, patterned their functions after the need to provide education for an elite. They cannot serve the masses of people with the necessary values and behaviors through which a student may conduct a personally satisfying life and fulfill his responsibilities as a citizen. They are often narrowly focused on preparing a student for graduate education and to foster the student's desire to remain in the academic setting. Many senior institutions are being forced to reevaluate their programs in light of new pressures to meet students' needs. (Committee on The Student in Higher Education, 1968)

All too often the faculty and administration of community colleges are concerned with survival by serving the needs of the transfer student traditional general education curricula. Arthur Cohen stated that the community college has tended to become a closed system of "...marks, methods, prerequisites, transfer requirements and the campus itself." (Cohen, 1969, page 82.) Patricia Cross noted:

> The prestige education of today was designed for and is perpetuated by, academically oriented faculty and students. It plays to the strengths of traditional students and the weaknesses of new students. To claim that equality of access leads to equality of education opportunity to learn is to over-simplify the problem. (Cross, 1971, page 184.)

The Newman Report, alike, highlighted weaknesses in the curricula and instructional methods currently used in most general education courses. (Report on Higher Education, 1971. Hereafter, this source is cited as the Newman Report.) It stated that teachers, institutions, and students must make basic decisions regarding their roles. These roles seemed to be adapted to the traditional lockstep pattern of education. The mode of learning where students sit and listen, where teachers lecture as they have for hundreds of years, should be reevaluated with a view toward making education a "useful and personally significant experience." (Newman Report, 1971, page 3.)

Social Science 101 is the first of two semesters of required interdisciplinary, general education, social science offered at a large urban community college. It is an

> ...interdisciplinary analysis of social interchange, social organization and personality development. There is a major emphasis on culture, its character shaping functions and its reflection in language, attitudes and behavior. (Miami-Dade Community College Catalog 1974, page 229.)

Imparting information through lecture and audiovisual techniques has long been the major teaching method. Many Social Science Departments are reexamining their programs, inquiring as to the kind of social science program that can fulfill the needs of their students. In one rationale written for a recent workshop it was stated,

> We need to reevaluate our own professional roles and skills in terms of new designs in social science programs. (Social Science Department, 1974, (a), page 2.)

At a workshop held for this purpose, faculty of the same Department concluded that less emphasis should be put on theory, more on practical work, and on society and its problems. They expressed interest in reevaluating teaching strategies for "maximum student learning." (Social Science Department, 1974, (b), page 2.)

It is increasingly clear to many that the material presented in class must be more closely related to the needs and interests of students, both in the desired end-states and means of instruction. A comprehensive theory was needed -- otherwise revision would have amounted to mere "tinkering". A review of the research on the community college student, his needs, and preferences for instruction would have to inform this revision. Based on findings, a model curriculum for general education, interdisciplinary, first semester social science would have to be prepared.

It was hypothesized that a social science curriculum and instructional methods built on theories and research findings covering experiential education could effectively meet the weaknesses found in the curriculum. Experiential education in this study will mean education based on content, activities and goals planned around the needs and interests of students, and on methods stressing student participation. Used in this sense, there is a recognition that not only is the student's brain and hearing involved but, also, all his other senses, feelings and emotions.

Experiential learning is learning which actively involves the student in experiences from which he identifies facts, makes generalizations, tests ideas and experiences consequences. The experiences provided are based on the student's interests and needs. Experiential education was formally summed up by Dewey,

> ...in the idea of continuous reconstruction of experience, an idea which is marked from education as preparation for a remote future, as unfolding, as external formation and as recapitulation of the past. (Dewey, 1916, page 80.)

Providing an education that is built with more connection to student needs is, as pointed out earlier, receiving renewed interest. The Committee on The Student in Higher Education said:

> Something better is possible when we put the individual student, and not abstract curricular concepts, at the center of experience... In the interminable discussion over curriculum reform, there seems to be little recognition of the fact that if curriculum is to be really effective educationally, the material presented in the classroom must be related to the needs and interests of students. (Committee on The Student in Higher Education, 1968, page 17.)

Dewey repeatedly stressed that a split between learning from experience gained outside school, and learning subject matter taught in school is undesirable. The result is that students are not given a meaningful education:

> Emphasis upon symbols and institutions tends to divert perception from the directed growth of experience in richness of meaning... The outcome of (teaching) theory in practice was shown to be an undue emphasis upon the training of narrow, specialized modes of skill at the expense of initiative, inventiveness, and readaptability, qualities which depend upon the broad and consecutive interaction of specific activities with each other. (Dewey, 1916, page 68.)

> Sharing in actual pursuit, whether directly or vicariously in play, is at least personal and vital... Formal instruction, on the contrary, easily becomes remote and dead-abstract and bookish, to use the ordinary words of depreciation... There is the standing danger that the material of formal instruction will be merely the subject matter of the schools, isolated from the subject matter of life-experience. (Dewey, 1916, page 8.)

Education, especially general education, must be more than the transmission of a body of knowledge, it must serve the student. He must learn by experiencing and evaluating the structure and interrelation of knowledge to the activities of life in which he is involved and that are important to him.

The philosophical and psychological basis of experiential education is that knowledge arises within the student, rather than directly from sources outside the student. The learner is aided in constructing images or concepts for the information he is processing. The teacher is seen as an enabler or midwife. Dewey stated that,

The development within the young of the attitudes

> and dispositions necessary to the continuous and progressive life of a society cannot take place by direct conveyance of beliefs and knowledge. (Dewey, 1916, page 22.)

The student's attitude toward life and the process by which he adjusts to it, should be of primary concern to the educator.

If one values outcomes going beyond acquisition of knowledge, student-centered methods seemed to be an effective way to obtain them. McKeachie reported that,

> In 11 studies, significant differences in ability to apply concepts, in attitudes, in motivation, or group membership skills have been found between discussion techniques emphasizing freer student participation compared with greater instructor dominance. In 10 of these the differences favored the more student-centered method. (McKeachie, 1963, page 1140.)

Some maintain that student-centered teaching results in sacrifice of content. It is true that poor students may gain more from directive classes, but McKeachie, in reviewing the research in this area, reported:

> We had suggested that student-centered teaching might be ineffective in achieving lower-order cognitive objectives. Experiments reporting loss and gains in this area seem to be balanced. Students apparently can get information from textbooks as well as from the instructor. (McKeachie, 1963, page 1140.)

Discussion methods help students to learn to think and apply concepts to new situations. It would seem an excellent method for increasing students' faith in their intellectual abilities.

Students in group-centered classes have also been shown to have more insight and understanding into the personal problems of others. (Bovard, 1951.) Students taught by "participative-action" methods were significantly superior in role flexibility and self-insight to students taught by traditional lecture methods. (L.M. Gibb and Gibb, [illegible].)

In experiential education the teacher helps the student in forming and testing ideas, not in the abstract, but within situations of interest and importance to the student. The formation of thought occurs within an environment the student is required to function in and get feedback from. He experiences the consequences of his decision, thus his motivation to adjust is reinforced. The information and generalizations he forms and tests remain useful; motivation continues and learning is the result of participation in the processes of thought and reality testing.

The approach found in experiential education would appear to be designed to meet the challenge of the seventies. Johnson (1969) has stated that if changes in student enrollment continue to take place, there must be changes in institutions of higher education. Comfortable complacency with "tried and true" must be overcome and innovation must proceed. The sixties brought respectability to the community colleges when they clearly demonstrated that they could provide quality education for increasing numbers of students. Now the new student is to be served and the "old client" served better. Innovation such as experiential education could overcome objections of teachers in the past that traditional "intellectual" values of examination and synthesis are usually shunted aside by innovation. Experiential education will accept these values yet will center on the student and his needs, an important goal of the seventies.

STATEMENT OF THE MAJOR ISSUES AND RESEARCH QUESTIONS

What activities or learning experiences were in line with experiential learning theory? In experiential education the stress was on helping students form and test ideas from material close to their interests. This question raised the issue of how much content to stress? Learning experiences should serve as points of departure for concept and intellectual development, not as ends in themselves. Affective course goals are also important. Increasing emphasis is being given to the affective domain, however, care must be taken not to have the course end up as one in which feelings, attitudes and viewpoints become the sole concern of the course - a common fate of student-centered curricula. (Gallant, 1973.)

Progressive educators typically have neglected the emphasis Dewey gave to intellectualization and concept development. It seems either the student and his needs and interests dominate the course or it is abstract subject matter and content outside the experience of students that dominate.

Dewey clearly took a middle position, between knowledge for its own sake or complete abandonment of this position.

> Dewey saw the child as the center of the educational process in the sense that it is he for whom education is intended. He becomes the basis for the selection and timing of subject matter and experiences. He is not the curriculum,

> nor does he intentionally and actively determine it, but it is planned in reference to him instead of to factors which are extraneous and unrelated to him. (Gallant, 1973, page 412.)

It was disturbing to note that:

> ...historically American education has been unable to locate a middle ground where either subject matter or the student was not in a position of stifling dominance over the other. (Gallant, 1973, page 417.)

What intellectual processes, observation, and thinking skills were involved in concept development and testing of ideas? A grasp of these processes was essential if the teacher was to guide the student's use of activities.

What teaching techniques were necessary to help the student use thinking skills and develop his experience into

> ... a fuller and richer and more organized form, a form that gradually approximates that in which subject matter is presented to the skilled, mature person. (Dewey, 1938, pages 73-74.)

The student must examine his experience. He should be guided in explaining or valuing. He must look at the implications of his positions as well as the validity and use of the facts he holds to.

What were the inter-personal conditions for experiential learning? Inter-personal conditions conducive to experiential learning require careful attention. For example, Faw (1949) pointed out that how the instructor treats erroneous or irrelevant information is likely to affect the outcomes of the planned course. Axelrod indicated guidelines should be set for when the instructor should interpret feelings and ideas of class members. (Axelrod, 1955.)

What teacher and student characteristics would combine most successfully with the experiential plan and philosophy of education? It is impossible to have a student-need-centered curriculum without taking into account needs and learning styles of students and their instructors.

What delivery system would meet basic requirements of experiential education and be flexible enough so that diverse needs of students could be met? Among alternatives available were the unit plan and the systems approaches that use individualized instruction.

The research plan of this study was to deal with the following questions:

I. What would the goals of experiential learning be?
    A. What emphasis would content receive in experiential education?
    B. What intellectual skills would experiential learning stress?
    C. What other goals would experiential philosophers, practitioners and researchers consider important?

II. How would experientially oriented philosophers, practitioners and researchers theorize learning occurred?
    A. What kinds of methods would serve what learning processes?
    B. How would activities and processes used in an experiential approach to learning differ from those of the traditional approach?

III. What would the teacher's role in experiential education

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be and how would it differ from the traditional role?

A. What functions would the experientially oriented teacher perform in class and how would they be performed?

B. How should the experientially-oriented teacher interact with his students?

IV. What student characteristics would be important to success in experiential education?

A. How would students be chosen who would participate in experiential education?

B. What functions would the student perform in class?

C. What would be the essentials of effective student relations in experiential education?

D. What would be the place of peer teaching in experiential education?

E. What relation between teacher and student characteristics would be most conducive to experiential learning?

F. What learning skills and styles would be optimal for students in experiential learning?

V. What student characteristics would the community college teacher have to take into consideration in experiential education?

A. What would be their socioeconomic background, parents' education, ethnic group characteristics, sex and age be?

B. What programs would these students be enrolled in and what would be their needs, abilities, and interests?

C. What would their academic skills and aptitudes be?

D. What feelings about their education would they bring to the class?

E. What groups of students might present special problems to the teacher who desires to implement experiential approaches to learning?

VI. What would the preferred methods and conditions of learning of community college students be?

A. How would community college students react to use of experiential learning techniques?

B. How would varying student preferences for instruction relate to other personality traits?

C. What would the effects of matching/mismatching students' preferences, personality traits and other variables with teaching methods be?

VII. Special considerations:

A. What place would behaviorial objectives have in experiential learning?

B. Should individualized instruction be used in experiential education?

C. How would experiential education be evaluated?

LIMITATIONS

This study was limited to a theoretical statement based on a thorough and comprehensive review of the literature. It was intended that the results of the study would serve the freshman community college student enrolled in general education, interdisciplinary social science courses offered by an urban community college with a heterogeneous student population. It was recognized that there may be many types of teachers or students who would not profit from, or adapt to, the materials, curricula, or teaching procedures of experiential education.

CHAPTER II

PROCEDURE

In this chapter sources of information and analysis and interpretation of data are discussed.

SOURCES OF INFORMATION

The works of widely respected theorists, researchers and practitioners of experiential education were consulted for fuller development of the theory and philosophy of experiential learning. Research was obtained by survey in areas of experiential education, process instruction, direct experience, activity learning, problem solving, peer teaching, self-paced instruction, student-centered instruction, innovation in material and curricula, student participation, thought processes, audiovisual instruction, characteristics of community college students, cognitive styles of community college students and various teaching methods.

Such periodicals and publications as Findings, New Directions for Community Colleges, Community and Junior College Journal, Journal of Educational Research, Educational Researcher, Junior College Researcher Review, Journal of Experimental Education, Community College Social Science Quarterly, Education, The Journal of Applied Behavioral Science, Social Education, Phi Delta Kappan, Journal of Teacher Education, Educational Technology, Journal of

Educational Psychology and The Clearing House were consulted. Publications of the American College Testing Program and Educational Testing Program were also surveyed. The Handbook of Research on Teaching and The Second Handbook of Research on Teaching were regarded as authoritative surveys of research done prior to 1973 on teaching methods and effects of matching teaching methods with student characteristics. The Review of Educational Research and the Educational Resources Information Center (ERIC) were used as reference tools.

Requests for bibliographic sources and abstracts were made to Florida Educational Resources Information Center (FERIC). Topics requested were chosen after careful review of the index of ERIC and included: community college student characteristics, community college, Dewey, inquiry, individualized instruction, inquiry, learning process, simulation, social studies, student participation, visual literacy, role playing, process instruction,small group instruction, direct experience, problem solving and activity learning. FERIC made a computer search dating back to 1960 of Research in Education, Curent Index to Journals in Education and Education Index.

A request for bibliographic sources was made of University Microfilms. Ninety seven references were found. Key words in the query included, names sent to FERIC as well as teaching styles, direct, indirect, discovery, structured, unstructured, learning style, student-centered learning and field experience.

Correspondence was also addressed to those authors whose work was found particularly useful. Statistics and research on characteristics of Miami-Dade students were also reviewed and data solicited from administrators. Departmental and divisional records were surveyed for information concerning course policies, revisions, goals and other guides to curriculum.

Curriculum materials were compiled from a number of sources including over thirty-five letters written to publishers of games, an annotated audiovisual file of more than 500 sources kept by the author, and an audiovisual file of the Social Science and other departments.

ANALYSIS AND INTERPRETATION OF DATA

Data to investigate the question researched in this study were mainly gathered from comprehensive review of the literature as well as results of surveys and studies carried out at Miami-Dade Community College. A great deal of information especially regarding student characteristics and innovative curriculum came from documents acquired and processed by ERIC.

The findings are reported and summarized in Chapters III, IV and V. In Chapter III experiential approaches to education were analyzed. Chapter IV was a study of demographic and intellectual interests and needs of community college students. Cognitive and learning styles of these students were analyzed in Chapter V.

Statistical data were appropriately displayed where display of such data added meaningful interpretation to the subject matter. In Chapter V findings on student characteristics and preferences as well as on experiential education were combined and developed into summary form with implications for a curriculum design. A curriculum representing an effective implementation of both theoretical and empirical findings was designed and appears in Appendix B. An overview with recommendations of the Curriculum was prepared and appears in the Curriculum Design section of Chapter VI.

CHAPTER III

PHILOSOPHY AND PRACTICE RELATING TO EXPERIENTIAL EDUCATION

The community college instructor in order to carry out an experiential approach to instruction must have an intellectual framework which includes both theory and practice in experiential education. He must know which methods are recommended, when and for what purpose they are recommended, what it is assumed is learned through these methods, and what these methods require of student and teacher. He must also have in mind the goals of experiential education. This chapter will present various theories which provided such a framework.

These authors whose views were found by this researcher to offer the most insight into the theory and practice of experiential education were Dewey, Coleman, Kolb and Stadsklev. The investigator therefore presented what he believed to be their best statements about aims and assumptions underlying experiential as well as traditional teaching and learning processes and what he felt were their best descriptions of actual methods, their sequencing, and demands on student skills. At the end of this chapter conclusions will be drawn based on findings within the chapter.

THE ANALYSIS OF JOHN DEWEY RELATING TO EXPERIENTIAL LEARNING

John Dewey provided the intellectual framework within which the concept of experiential learning was broadened and developed. He believed that truth was not an unchanging body of ideas but rather a social process by which the individual and society interacted to evolve methods of adaptation and survival. As such it leaned heavily on experience, constant change and readjustment.

Presented in this chapter are Dewey's findings on the following:

1) the goals of education,
2) how the process of learning should take place,
3) how the learning should be implemented.

THE EDUCATIONAL GOALS OF DEWEY

The goal of learning, Dewey believed, should be the ability to function effectively within the environment, not simply the retention of an unchanging body of ideas or skills.

> Knowledge in the sense of information, means the working capital, the indispensible resources, of further inquiry; of finding out or learning more things. Frequently it is treated as an end itself, and then the goal becomes to heap it up and display it when called for. This static cold-storage ideal of knowledge is inimical to educative development. It not only lets occasions for thinking go unused, but it swamps thinking. No one would construct a house on ground cluttered with miscellaneous junk. (Dewey, 1916, page 158.)

> Thinking which is not connected with increase of efficiency in action, and with learning more about ourselves and the world in which we live, has something the matter with it... information severed from thoughtful action is dead. (Dewey, 1916, page 154.)

Thus the goal of learning is envisioned as an enabling process.

Dewey believed that learning was a cooperative endeavor. Thus, the learning of goals should be a cooperative venture between student and teacher. Once goals have been set mutually, the student as well as the teacher bears the responsibility for their consequences. Goals should be constantly tested for their applicability to experience; where they are no longer viable they are to be changed. This pragmatic concept of truth as process in education, was innovative with Dewey.

Since the goals are not totally imposed from the outside, but rather a joint venture, the attitude of the learner will be positively effected. He will conceive of the learning process as the ability to work within a group and experience will be the new material. It should develop on the part of the learner a special sensitivity to others and to life situations. Dewey wrote:

> It (habit and experience) covers the formation of attitudes, attitudes that are emotional and intellectual; it covers our basic sensitivities and ways of meeting and responding to all the conditions which we meet in living. (Dewey, 1938, page 35.)

He stated that properly designed,

> ...an experience arouses curiosity, strengthens initiative, and sets up desires and purposes that are sufficiently intense to carry a person over dead places in the future. (Dewey, 1938, page 33.)

Another goal Dewey felt was important for education was that of:

> The development within the young of the attitudes and dispositions necessary to the continuous and progressive life of society. (Dewey, 1938, page 56.)

He suggested that for the educator should impart to the learner and understanding of the functions of the institutions of society, but, more important, social as well as intellectual skills need to produce an individual who would have the desire for and ability to take his place in productive interpersonal relationships. Social skills including an ability to work with people, to be effective in a group and necessary intellectual skills included the above mentioned capacity and confidence in having and testing ideas.

> What is learned in the way of knowledge and skill in one situation becomes an instrument of understanding and dealing effectively with the situations which follow. (Dewey, 1938, page 44.)

Thus,that which he has learned will form a bridge enabling him to cope with the future.

To conclude, Dewey envisioned learning as an enabling process allowing the learner to set his own goals within the framework of society thus freeing him from the classroom and leading him to true autonomy within society. The learner had to develop the means for becoming autonomous, by working effectively within a group, becoming aware of his own needs and their interaction within society. He believed that the learner's attitude should be affected by the process of learning, thus, if he saw himself as active in the establishment of goals for himself and society, he would have a true sense of his own worth and importance within society.

DEWEY's CONCEPT OF THE PROCESS BY WHICH LEARNING TAKES PLACE

Dewey believed that the only real learning occurred when the learner could test his hypothesis within a real situation using his own judgement regarding the nature of the situation, his prior experience, and would force him to extrapolate his actions from these. For Dewey hypothesis was the tentative workability of an idea within a situation. Idea in the traditional sense and hypothesis were used interchangeably by Dewey. Thus Dewey conceived of learning as a constant process in which old ideas are tested and new ones evolved, as we can infer from the following quote:

> The statement that individuals live in a world means, in the concrete, that we live in a series of situations. ...It means that interaction is going on between an individual and object and other persons. The concepts of situation and of interaction are inseparable from each other. An experience is always what it is because of a transaction taking place between an individual and what, at the time, constitutes his environment, whether the latter consists of persons with whom he is talking about some topic or event, the subject being also a part of the situation... The environment, in other words, is whatever conditions interact with personal needs, desires, purposes, and capacities to create the experience which is had. (Dewey, 1938, page 44.)

For Dewey the world of the learner consisted of a series of situations by which he might test the workability of his ideas of hypothesis.

DEWEY'S RECOMMENDATION FOR IMPLEMENTATION OF THE LEARNING PROCESS

Dewey believed that one of the essential roles of the educator was to provide experience for the learner. Experience from which all learning derived would enable the learner to cope with future experiences.

To teach effectively, the educator, according to Dewey, would have to know the structure of environment in which all learning takes place so he could provide activities that would lead to the appropriate learning experience. He would have to know his subject matter thoroughly and know the types of activities available which would correlate with the needs, capacities and interests of his students. Dewey, in the following excerpt, spelled out the conditions of the learning experience which the teacher should create.

> They are, first, that the pupil have a genuine situation of experience, that there be a continuous activity in which he is interested for its own sake; secondly, that a genuine problem develop within this situation as a stimulus to thought; third, that he possess the information and make the observations needed to deal with it; fourth, that suggested solutions occur to him which he shall be responsible for developing in an orderly way; fifth, that he have opportunity and occasion to test his ideas by application, to make their meaning clear and to discover for himself their validity. (Dewey, 1916, page 163.)

The teacher was to present what the student accepted as a genuine problem, make sure that they had the capability of apprehending it, and thus be able to evolve workable solutions. An important aspect was that the learner be able to comprehend the implication of his solution, or solutions, preferably by first hand experiences.

In this process of evolving solutions, through experience, he was generating ideas or hypotheses through the use of intelligence.

> ...all thinking is original in a projection of considerations which have not been previously apprehended... no thought, no ideas can possibly be conveyed as an idea from one person to another. When it is told it is, to the one to whom it is told, another given fact, not an idea... what he directly gets cannot be an idea. Only by wrestling with the conditions of the problem at first hand, seeking and deciding its way out, does he think. (Dewey, 1916, page 159.)

From the above quote Dewey clearly implies that the learner should not be simply the passive receptor of the instructor's concepts.

Dewey put this teaching-learning situation at the heart of the process by which students should be taught. He said,

> All authorities agree that discernment of relationships is the genuinely intellectual matter; hence, the educative matter. The failure arises in supposing that relationships can become perceptible without experience - without that con-joint trying and undergoing which we have spoken of. It is assumed that "mind" can grasp them if it will only give attention, and that this attention may be given at will irrespective of the situation. Hence the deluge of half observations, of verbal ideas, and unassimilated "knowledge" which afflicts the world. An ounce of experience is better than a ton of theory simply because it is only in experience that any theory has vital and verifiable significance. (Dewey, 1916, page 144.)

Thus, in the writer's opinion, there is no substitute for the "trial and error method of learning", though it definitely requires more subtlety and skill on the part of the teacher in presentation.

According to Dewey, the task of the teacher is to introduce a series of problematic situations, each situation preparing the student to cope with, what would be for the student, a more challenging problem. Thus each experience prepared the way for the next:

> It too becomes the office of the educator to select those things within the range of existing experience that have the promise and potentiality of presenting new problems which by stimulating new ways of observation and judgement will expand the area of further experience. He must constantly regard what is already won, not as a fixed possession but as an agency and instrumentality for opening new fields which make new demands upon existing powers of observation and of intelligent use of memory. Connectedness in growth must be his constant watchword. (Dewey, 1938, page 75.)

It will be remembered that Dewey implied that the teacher structures various problematic situations which would enable the student to evolve viable solutions.

The technique in constructing this hierarchy of experience is suggested by Dewey in the following quote:

> The... first approach to any subject in school, if thought is to be aroused and not words acquired, should be as unscholastic as possible. ...give the pupils something to do, not something to learn; and the doing is of such a nature as to demand thinking, or the intentional noting of connections; learning naturally results... something to do which is not either routine nor capricious-something, in other words, presenting what is new (and hence uncertain or problematic) and yet sufficiently connected with existing habits to call out an effective response. (Dewey, 1916, page 154.)

Dewey's concept that one learns by manipulation of the concrete and makes the leap to abstraction foreshadows the work of Montessori, Piaget and indeed, most modern philosophers and educational theorists.

Dewey divided the world into subjective and objective conditions. Subjective conditions were the internal factors such as "...the powers and purposes of those taught." (Dewey, 1938, page 45.)

Dewey continually emphasized that teaching could not occur unless the needs, capacities, and interests of the learner were taken into account and made to interact with the objective conditions.

For purposes of this discussion, the subjective conditions imply the readiness of the student for certain types of experience:

> It is not the subject per se that is educative or that is conducive to growth. There is no object that is in and of itself, or without regard to the stage of growth attained by the learner, such that inherent educational value can be attributed to it. ...there is no such a thing as educational value in the abstract. (Dewey, 1938, page 46.)

Dewey also made educators aware that within the learning experience there are areas which had been considered peripheral or frivolous but which modern educators, such as Montessori, recognize as of central importance. That is the environment within which learning takes place and the attitude of the teacher and other members of the class. Dewey said:

> ...objective conditions cover a wide range. It includes what is done, not only words spoken but the tone of the voice in which they are spoken. It includes equipment, books, apparatus, toys, games playing. It includes the materials with which an individual interacts, and most important of all, the total social set-up of the situations in which a person is engaged. (Dewey, 1938, page 45.)

Since Dewey stressed "...all human experience is ultimately social in that it involves contact and communication," (Dewey, 1938, page 38) and indeed that truth was a form of social hypothesis, the teacher would be constantly aware of the social nature of learning:

> The social environment consists of all the activities of fellow beings that are bound up in the carrying on of the activities of any one of its members... It is truly educative in its effect in the degree to which an individual shares or participates in some conjoint activity. By doing his share in the associated activity, the individual appropriates the purpose which actuates it, becomes familiar with its methods and subject matters, acquires needed skill and is saturated with its emotional spirit. (Dewey, 1916, page 37.)

In the previous section it was mentioned that Dewey stressed that education was a cooperative enterprise in which the student was an active participant.

> ...there is no defect in traditional education greater than its failure to secure the active co-operation of the pupil in construction of the purposes involved in his studying. (Dewey, 1938, page 67.)

To secure the active cooperation the teacher,

> ...loses the position of external boss or dictator but takes on that of leader of the group activities. (Dewey, 1938, page 59.)

He allows suggestions,

> ...made to develop into a plan and product by means of the further suggestions contributed and organized into a whole by the members of the group. The plan, in other words, is a co-operative enterprise, not a dictation. The teacher's suggestion is not a mold for a cast-iron result but is a starting point to be developed into a plan through contributions from the experience of all engaged in the learning process. (Dewey, 1938, page 72.)

Dewey wanted the teacher to be an active, not necessarily a permissive leader.

> The mature person, to put it in moral terms, has no right to withhold from the young on given occasions whatever capacity for sympathetic understanding his own experience has given him. (Dewey, 1938, page 38.)

Thus it follows that Dewey foresaw the role of the teacher as an enabler rather than a dictator whose methods freed the students from dependency on authority. Dewey gave concrete recommendations on how the teacher could achieve this desired goal.

Dewey's primary significance is that he broke down the traditional approach to education in emphasizing the necessity of action as part of the learning process. Truth was not a set body of ideas but the ability to attain social adjustment. As Dewey stated,

> Thinking which is not connected with increased efficiency in action, and with learning more about ourselves and our world in which we live, has something the matter with it. (Dewey, 1916, page 154.)

He provided the philosophical framework that gave intellectual respectability to the work of philosophers, educational theorists, teachers and researchers who were to follow. He placed the student's readiness, his capacities, his needs at the center of the learning experience. He seems unique in stressing the social nature of the learning experience and in emphasizing the role of the problematic situation as central to the learning process. Dewey's contribution to teachers in experiential education is invaluable.

THE ANALYSIS OF JAMES S. COLEMAN RELATING TO EXPERIENTIAL LEARNING

The writing of Coleman gave additional insight into the theory of experiential learning as well as adding some new concepts in methodology. He broke down the process of experiential learning into four steps and analyzed the strengths and weaknesses of each step. The first step was to present the student with a situation that required participation and action by the student that resulted in some consequence to him. For example, participation in a simulation game could be used. Though not as effective as actual experience, the student could observe others, participate and experience consequences vicariously.

Though Coleman does not specify what the "consequences" are, the implications are that they are in the winning of the game itself. However, for Coleman, these consequences,

> ...ordinarily termed a "reward" or "punishment" ...is, however, in the case of human experiential learning, somewhat more general than this, for the effects of the action may be neither rewarding nor punishing, yet provide information about a sequence of cause and effect. (Coleman, 1974, page 4.)

This is of significance for the experiential teacher and will be discussed later.

His first step in the learning context of experiential learning is the establishment of a situation which resembles "trial and error". Something has to be experienced by the student as a result of his actions and participation. The important aspect of experiential learning was that it began with action.

Although participation in games was mentioned, he did not specify other types of action. It is "instruction by action" and experience of consequences or the observation of them that is significant.

> In its ideal form, it (the experiential process of learning) does not use a symbolic medium at all, but only action and observation of concrete events following the action. (Coleman, 1974, page 10.)

The second step in experiential learning, after participation and experiencing the consequences, was called by Coleman "understanding the particular case." The student took note of and understood his actions, their effect and the situation.

Coleman postulated a third and fourth step in the game model or experiential mode of learning. The third step involved the student in generalizing:

> From understanding the particular instance, the next step is an understanding of the general principle under which the particular instance fails. (Coleman, 1974, page 5.)

Therefore, the learning process would be inductive going from the specific to the general.

Coleman noted students seemed to differ in the ability to induce from particular to general. Some would be able to do it with one example or experience, others need several participations in a wider range of circumstances that illustrate the general principle. Students would have different generalizations to make as games encompassed a wide range of skills and backgrounds.

Coleman stressed the post-game discussion as extremely important for learning. In steps 2 and 3, cause and effect connections, even though experienced, should be stressed and generalizations should be made.

Coleman said,

> ...when consequence is perceptibly connected to action, then such experiential learning provides a direct guide to future action.

Since discussion of consequence or cause and effect of actions is stressed, thus reinforced, Coleman points out that the nature of the learning is that there should be

> ...no hurdle from a symbolic medium to action, but only modification for the action to fit the circumstance. (Coleman, 1974, page 12.)

The student, Coleman noted, may be able to show he has understood the generalization by acting in a new situation (Step 4), but he may not be able to verbalize his understanding, simply be able to act on it in new circumstances. However, Coleman pointed out, for many students,

> ...a strong, second learning experience occurs in discussion after the game... play in a game is not a self-contained learning method but one that is complementary to the verbal discussion and information-transmission of which most school activity is now composed. (Coleman, 1968, page 24.)

Step 4 of experiential learning was termed by Coleman: "action in a new circumstance." The student would demonstrate his ability to apply his understanding of the principle, "...through action in a new circumstance within the range of generalization." (Coleman, 1975, page 5.)

Coleman noted the characteristics of simulations that were particularly conducive to learning. The game-learning model allows the student to

> ...practice, in his limited framework (a set of players, and other constraints on behavior), action that is interdependent with the actions of others, carried out within a set of rules, in pursuit of a goal. (Coleman, 1968, page 16.)

The student must take action within a specially created environment, and then must experience the reward or consequences of his actions in this environment. Thus the student learns the cause and effects on relationships through experiencing the effects of interactions between himself and others.

Besides constructing an idealized theoretical experiential situation, and noting the learning processes involved, he contrasts his experiential model of learning and teaching with a theoretical model of traditional teaching in which learning is accomplished through information-assimilation.

The first step given by Coleman was receipt of information. The transmission of information was through a symbolic medium such as a lecture, books, etc., and occurred visually and/or orally.

Next, the student had to understand the general principle. He had to assimilate and organize the verbal, symbolic material into his own framework of experience, rather than memorize it.

> In most things to be learned, the information is intended to be processed, so as to lead to an understanding, rather than mere commitment to memory. (Coleman, 1974, page 3.)

Only by assimilation would the general principle be understood.

> At this point one can be said to have learned the meaning of the information, to have assimilated this information as knowledge. (Coleman, 1974, page 3.)

Step 3, according to Coleman, involved the student in "particularizing." This involved giving the student practice in inferring a particular application from the general principle. The student had to be able to tell which principle applied in a particular instance. Step 4, involved moving from the cognitive and symbolic processing sphere to the sphere of action, using general principle understood to apply it to a particular situation.

In the last step in the instruction by transmission of information the student is expected to be able to act, to move,

> ...from the cognitive and symbol processing sphere to the sphere of action. Only when this step has been completed can the person be said to have completed the learning so that the information initially received is useful to him in his everyday action. (Coleman, 1974, page 4.)

Coleman discussed various other weaknesses in traditional learning process. Though he found that the properties of information assimilation reduced the time and effort required to acquire symbolic representation of something new, because the student did not have to bring together inferences from a wide range of experiences, he found it lacking in four other areas: It was highly dependent on cognitive skills and verbal abilities, the move from understanding to action was large and often not undertaken by the student, and motivation to learn was weak and forced the teacher to use extrinsic motivations such as grades. A verbal structure of knowledge is more apt to be forgotten, Coleman believed, whereas a structure of experientially acquired knowledge (through action) was retained longer.

Coleman felt that the experience-processing mode of learning provided answers to all three of these objections. Though he did not reject information-assimilation as a means of learning he did feel that experiential learning could be used to overcome the three main weaknesses of traditional instruction.

With experiential teaching the student has mastered the principle through action rather than simply verbally. Therefore, the ability to apply the principle in future action should follow naturally. In addition, Colsman believed that knowledge of principles based on action was retained longer than one that was purely symbolic.

Coleman pointed out that the transmission and assimilation of symbols, usually verbal, could not be done equally well by all, that assimilation of verbal information depended greatly on the learner's linguistic background and skills.

In the words of Coleman:

> ...there is a cost to the compression of experience through language, the cost that lies in the incompletely understood language, defects in the chains of associations that the words may bring, defects in the processing of information stored in the form of words and their associations. The cost lies in the dependence of this process of learning on prior learning of a complex system of symbols. When this set of symbols, and the skills of

> manipulating it, are poorly learned, then learning through information assimilation with a symbolic medium must itself be poor. (Coleman, 1974, page 10.)

Coleman believed that language and the manipulation of symbols were not sufficient media for a true learning experience. Language must be supplemented by experience.

A final difference in the area of learning outcomes between the traditional model of instruction and the social simulation game model of learning is in the area of motivation. Coleman theorized that in the school model of learning, where students are taught by "instruction", the teachers were not primarily interested in creating motivation that leads a student to actively assimilate the information transmitted to him. The student is assumed to be already motivated or that the material will remain with him until he has future use of it. Grades are used to serve as temporary motivation.

In the experiential model of learning the game motivates the student to seek knowledge. Even though in a game the learning is incidental to the student's achievement of a goal, self-motivation seems to lead to retention of principles and the desire to acquire further information. Coleman believed that the reason this took place was that the student,

> ...becomes motivated to pick up more and more information about the new environmental context that enables the action to take place more efficiently. (Coleman, 1968, page 17.)

The reason that Coleman stresses gaming is that at the outset of the game the student must learn the rules in order to play.

> ...Since action occurs at the beginning of the sequence rather than at the end, the need for learning exists from the beginning. If the learner is to gain his ends through the action, he must learn whatever is necessary to guide his action. For this reason, motivation is seldom a problem with experiential learning, while teachers often see it as the major problem of learning in school. (Coleman, 1974, page 13.)

In a sense the student learns motivation through playing the game. He learns a goal, the goal becomes meaningful to him, and he seeks information to attain it.

Coleman recommended that both methods of teaching be used in conjunction with each other but more attention be paid to using games first for the principle of motivation. It would seem to follow, from Coleman's theory that students who were especially weak in motivation, or for whom grades were not the ideal form of motivation, would particularly benefit from the experiential method of teaching.

A review of Coleman's work gave numerous and useful insights into the process of learning experientially versus the traditional information method. Coleman's hypothesis is that there are benefits to be gained in experiential learning which are not present in the traditional situation.

Coleman outlined four steps basic for the acquisition of true learning. The four steps were: (1) participation in an activity in which the student must achieve a goal through his own action, (2) understanding the action, (3) generalizing about cause and effect relationships or whatever process or content the activity was intended to portray, and (4) application to a new situation. The entire process of learning can be expressed by the student non-verbally, although post-game observations, such as what happened and why, are significant learning experiences for the student.

Coleman indicated that the strength of his method is that the student is immediately, from the onset of the activity, forced to pay attention, think, act, and thus at least learn an appropriate pattern of behavior that serves in the activity. Since participation in the game is its own reward, the student wants to participate and the motivation is internal. The skills verbal/nonverbal, learned through action, have transfer value to similar life situations. Moreover, the student retains this knowledge better than in the traditional classroom model.

In contrast, Coleman believed that in the traditional mode using the four steps of, transmission, assimilation by discussion, generalization by discussion and application, there are four significant weaknesses. In the traditional mode the acquisition of verbal and symbolic knowledge may take place at a faster rate, however, the student may not be able to apply the principle learned or to recognize it in a life situation. Coleman believed that traditional modes rely heavily on the ability of the student to assimilate verbal information, thus the student who is weak in verbal skills does poorly in the traditional classroom. Inasmuch as in the traditional classroom motivation to learn (grades) is extrinsic, not related to the subject, his desire to seek knowledge is not stimulated. Coleman also believed that retention of principles was probably shorter when they were taught in the traditional mode.

However Coleman does not advocate discarding traditional methods (symbolic information-transmission-assimilation modes) but that experiential methods should come prior to it. He indicated that the attitudes gained in experiential teaching, e.g. self-motivation, application, will have transfer value. Thus, by combining methods, the student will experience greater success in the traditional classroom as well as in life situations.

THE ANALYSIS OF R.M. KOLB RELATING TO EXPERIENTIAL LEARNING

Kolb's analysis of learning by experience provided additional theoretical knowledge of how students learn from experience. His views yielded information particularly useful in adapting experiential learning processes to the strengths and weaknesses of particular learning styles.

Kolb believed that learning from experience occurred in four stages, each of which involved different activities and learning styles on the part of the learner. (Figure 3.1)

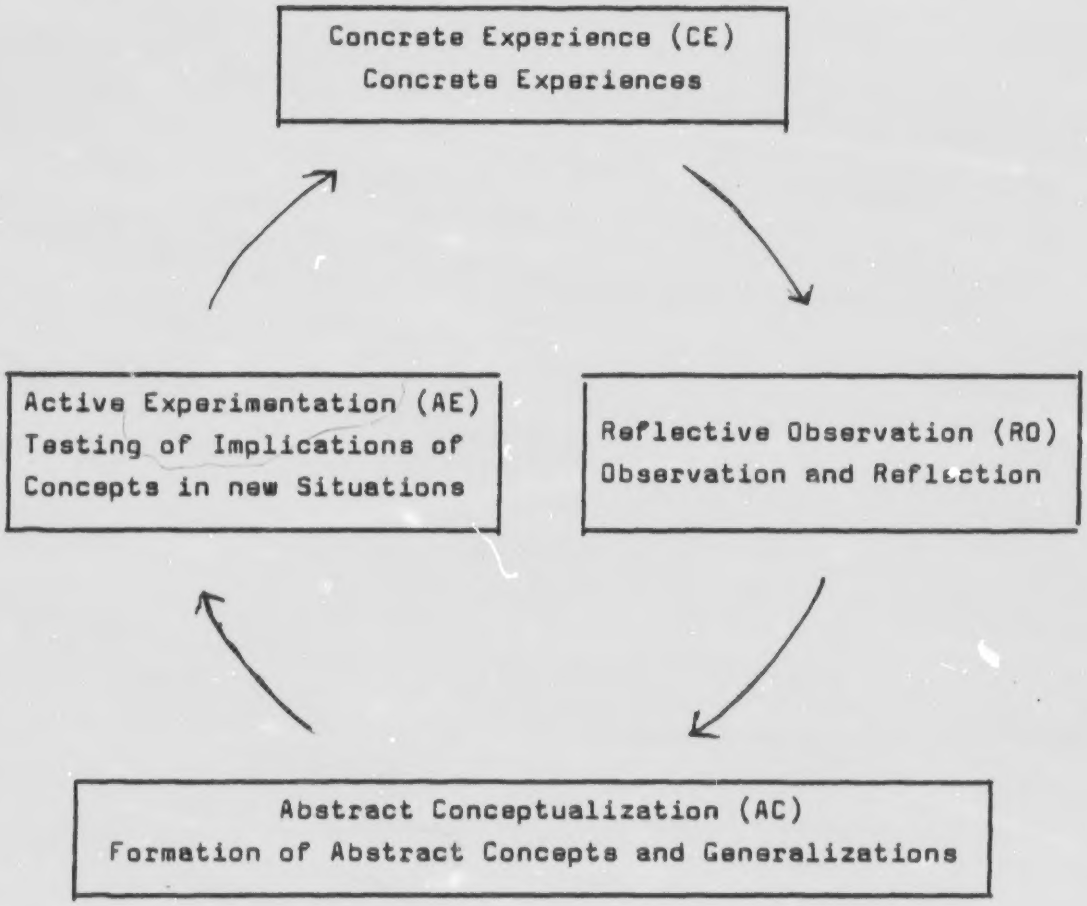
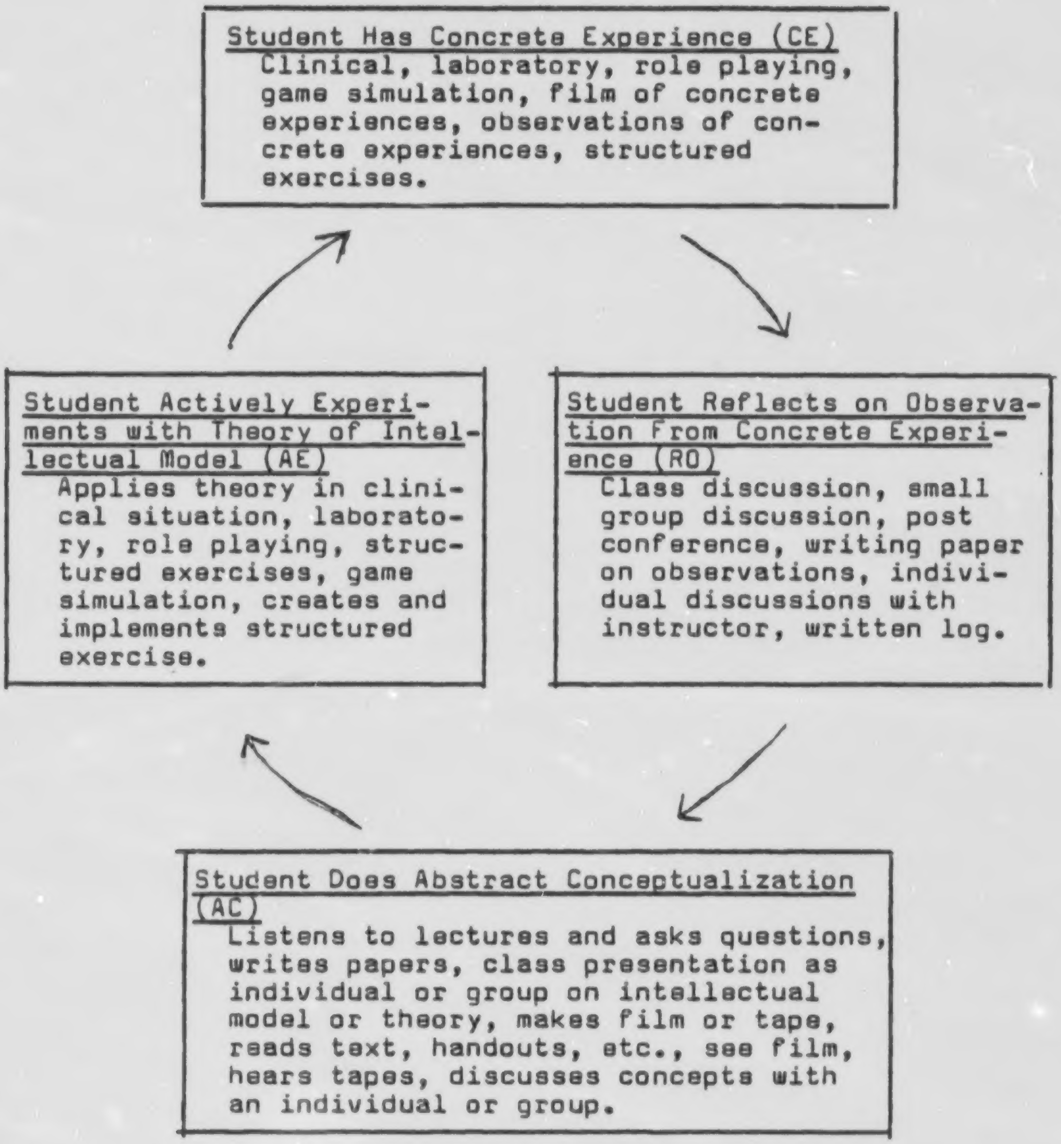

Concrete Experience (CE)
Concrete Experiences
Reflective Observation (RO)
Observation and Reflection
Abstract Conceptualization (AC)
Formation of Abstract Concepts and Generalizations
Active Experimentation (AE)
Testing of Implications of
Concepts in new Situations

FIGURE 3.1
The Experiential Learning Model

Learning from experience started with the student involved in a concrete experience (CE), then he must observe and reflect on it (RO), then abstract generalizations (AC) and finally apply these to a concrete situation (AE). All four of these learning styles or activities must be used at different times to achieve maximum learning from experience.

Kolb also outlined the types of methods which the teacher could use to implement the four stages of experiential learning. (Figure 3.2)



Student Has Concrete Experience (CE)
Clinical, laboratory, role playing, game simulation, film of concrete experiences, observations of concrete experiences, structured exercises.

Student Reflects on Observation From Concrete Experience (RO)
Class discussion, small group discussion, post conference, writing paper on observations, individual discussions with instructor, written log.

Student Does Abstract Conceptualization (AC)
Listens to lectures and asks questions, writes papers, class presentation as individual or group on intellectual model or theory, makes film or tape, reads text, handouts, etc., see film, hears tapes, discusses concepts with an individual or group.

Student Actively Experiments with Theory of Intellectual Model (AE)
Applies theory in clinical situation, laboratory, role playing, structured exercises, game simulation, creates and implements structured exercise.

Figure 3.2
Model for Learning Experience Design

The teacher gives a learning experience and encourages involvement, makes it possible for the student to observe and reflect on what he has experienced, encourages abstract conceptualization through other activities and finally sees to the reapplication of ideas.

In the first stage (concrete experience) the teacher can provide any of these experiences: role playing, game simulation, film of concrete experience, observations of concrete experiences, structured experiences, or a laboratory or clinical experience. These experiences are action oriented, that involve learning by doing, and problem solving for the learner. They are chosen by the teacher to enable the student to generate his own data about a key concept that would otherwise, in a lecture method, be presented in an abstract manner.

The next step in the process of learning from experience involved the student in observing and reflecting on what happened. (Reflective observation). This is an inductive stage during which the learner is called on to become aware and to recognize what happened during the first stage of learning. This new data included observations, actions, feelings and reactions.

The learner then entered a stage of learning in which he thinks of principles, concepts, hypotheses or generalizations. (Abstract conceptualization). This called for the learner to generalize, use logic, conceptualize, and use other thinking rational processes in combining and abstracting from the data revealed in step 2.

In stage 3 learning during which the student did abstract conceptualization, the student could listen to lectures, ask questions, write papers, make a class presentation as an individual or group on intellectual model or theory, make film or tape, read text, handout etc., see film, hear tape, discuss concepts with an individual or group. Kolb indicated that the group could process the pooled observations, feelings, reactions that were aroused from the original concrete experience and brought out in stage 2. From this data the group could

> ...attempt to pull out common threads and generalizations linked to other similar situations... The resulting concepts provide the fourth stage of the learning model. (Kolb, 1974, page 39.)

Kolb noted that the types of activities that the teacher could provide the student with to facilitate stage 2 learning (Observations and Reflections) were class discussion, small group discussion, post conference, writing papers on observations, individual discussions with instructor and written log.

Kolb particularly stressed the value of pooling responses, observations, etc., of individuals with those of others.

> The sharing of individual observations and reflections is an important part of the learning process. Each person has the opportunity to test his personal reactions and observations to a given experience with a number of others and he gives others the opportunity to test their reactions against his. The more open sharing there is, the greater is the data from which the entire group can learn. (Kolb, 1974, page 40.)

The fourth step in the experiential process is the application stage. Here the student actively seeks similar situations, tests and applies his principles in a new instance.

In the fourth stage of learning the student actively experiments. The teacher could help the student apply his concept and theorize in a variaty of ways, in role play, lab, clinical setting, game simulation, or he could create and implement a structured exercise. It was up to him, the student, to seek new experiences commensurate with his needs.

Kolb stressed that the fourth stage is one in which the responsibility for seeking new concrete experiences lay with the student, not the teacher, and thus initiate a new learning cycle. Kolb was interested in giving the student responsibility for his own learning thus stimulating self-directed learning. He anticipated that each student's needs and goals would lead him in different directions.

> ...the direction that learning takes is governed by one's felt needs and goals. We seek experiences that are related to our goals, interpret them in light of our goals, and form concepts and test implications of these concepts that are relevant to our felt needs and goals. (Kolb, 1974, page 28.)

Kolb indicated, the learner should probably initiate a new cycle all over again,

> ...this learning cycle is continuously recurring in living human beings. Man continuously tests his concepts in experience and modifies them as a result of his observation of the experience. In a very important sense, all learning is relearning and all education is re-education. (Kolb, Rubin and McIntyre, 1974, page 28.)

Another advantage that Kolb saw for his model was that it generated principles that were useful to the student, and which were specific rather than abstract, since they were based on knowledge derived from concrete experience.

Kolb studied the work of psychologists such as Bruner, 1966; Kris, 1952; Kagan, 1964; Harvey, Hunt and Schroeder, 1961 and others, and incorporated their findings and theories with his own model. From their findings he deduced particular learning abilities needed by the student in each stage of the process of experiential learning.

Kolb noted that the qualities required by the learner for step 1 (Concrete Experience) and step 3 (Formation of Abstract Concepts and Generalizations) require totally different intellectual and emotional qualities on the part of the learner. In the concrete experience one must lose one's reflective state and immerse oneself in the experience, e.g., one talks of "losing oneself" in a book or a movie. Conversely in the third stage (Formation of Abstract Concepts and Generalizations) the ability to understand one's experience requires ability to assume a mental set, detach the ego from the outer world, to account for acts to oneself, to verbalize the account, to grasp the essential of a given whole. Kolb did not place a value judgement on either ability, simply noted that both were necessary: "Abstractness is not exclusively good and concreteness exclusively bad." (Kolb, 1973, page 29.)

The other two characteristics required in learning that are opposed, are reflective observation and active experimentation. Kolb notes that,

> Reflection tends to inhibit action and vice versa. ...very active orientations toward learning situations inhibit reflection and thereby preclude the development of analytic concepts. (Kolb, 1973, page 29.)

Thus Kolb found two dialectics in the four stage experiential learning process. One was,

> ...the tension between actively testing the implications of one's hypothesis and reflectively interpreting data already collected. (Kolb, 1973, page 29.)

The other was the tension between detached thinking and active involvement.

Kolb stated that all of these abilities, while they tend to be contradictory, and create tensions within the learner, are necessary for growth and learning.

> The nature of the learning process is such that opposing perspectives, action and reflection, concrete involvement and analytical detachment are all essentials of optimal learning... When one perspective comes to dominate others, learning effectiveness is reduced... From this we can conclude that the most effective learning systems are those that can tolerate differences in perspectives. (Kolb, 1973, page 31.)

For optimal learning, all of these mental sets should be equal. However, Kolb theorized that this seldom happened. The differing background of the students, e.g., heredity and environment, predisposed them to strengths and weaknesses in each area.

Kolb felt it imperative that the student be aware of his strengths and weaknesses in order to maximize his learning capacities. He developed an instrument to measure these various capabilities called the Learning Style Inventory (LSI) which could be used by the teacher and students as a working tool strengthening the experiential learning process. (See LSI, Appendix A.)

The LSI developed by Kolb is a simple self-descriptive inventory that is designed to measure an individual's strengths and weaknesses as a learner. It measured an individual's relative emphasis on the four learning abilities - concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC), and Active Experimentation (AE). It has been administered to Massachusetts Institute of Technology and Harvard graduate students in management and norms established. Validity and reliability were apparently satisfactory.

Attempts at replication at Miami-Dade Community College - North Campus by John Scerba (1975) were unsuccessful, only a 0.38 test-retest reliability was found for the test re-administered after a two-week interval. The test was not successful at Miami-Dade Community College - North Campus, because the students lacked the verbal ability of the Harvard and MIT graduate students. When the researcher explained the terms used in the LSI and administered the test to his students, the students reported that the test did, indeed, indicate their learning styles. This points out to the author that use of the LSI with simpler terms inserted can be a useful tool in experiential education at the community college level. Inasmuch as the correlation between learning styles and actual teaching methods seem to be great and are of utmost importance to the community college teacher, student learning characteristics were researched and findings are presented in Chapter VI. This data will be further discussed in Chapter VII, "Findings and Implications."

Kolb viewed the role of the teacher in the experiential learning process as a facilitator. The teacher helps students to experience in an immediate, personal way the phenomenon of the field. He provides observational schemes and perspectives, by which to observe these experiences. He stands ready with alternative theories and concepts as students attempt to assimilate their observations into their own conceptions of reality. He assists the student in deducing implications of concepts and in designing new "experiments" to test these implications through practical real world experiences. (Kolb, 1973, page 39.)

To conclude, Kolb provided a theoretical model of the steps involved in experiential teaching and learning. He depicted it as a four stage process that moved from actual situation, to observation, to conceptualization and generalization, to testing the concept in action. At this point the entire cycle of learning begins anew as the student experiences and reflects on what the implications of his concepts in experience, were for him. He indicated exercises that the teacher could provide at every step to implement the process.

He noted that through use of this model, concepts that would be abstract in traditional teaching, would now be specific and serve the student in ways that were meaningful to him. It was the student's responsibility to test the implications of his knowledge in action.

Kolb further synthesized from research the learning abilities needed for each step in his learning model. He noted that the abilities required for each step were different and somewhat contradicted each other.

Kolb noted opposing strengths and weaknesses on the part of individual students.

Kolb found that another virtue of the experiential learning model was that it helped the student become a better learner by requiring him to use all his abilities in learning from experience. Kolb believed his method would have greater transfer value outside of the classroom than the traditional model. He believed that it was of the utmost importance that students have the skills to apply that which they learned, indeed learning for Kolb was not so much a memorization of specific ideas as the ability to adapt to the constantly changing demands of jobs and careers in a constantly changing world.

> Today's highly successful manager or administrator is distinguished not so much by any single set of knowledge or skills but by his ability to adapt to and master the changing demands of his job and career, i.e., by his ability to learn. The same is true for successful organizations. Continuing success in a changing world requires an ability to

> explore new opportunities and learn from past successes and failures. (Kolb, 1973, page 27.)

Kolb developed the Learning Styles Inventory (LSI), as a simple self-descriptive-inventory of learning strengths and weaknesses. When the LSI was used at MIT and Harvard it was successful; however, attempts to use this at the community college where this study is being prepared failed, it was believed, due to inadequate student preparation.

Kolb's concepts seem clear enough that a modified instrument can be prepared and, even without an instrument, the insight provided by Kolb into experiential learning, together with practical suggestions and the example of this textbook (Kolb, 1973) were found to be of great aid in the design of an experiential approach to learning.

THE ANALYSIS BY RON STRADSKLEV RELATING TO EXPERIENTIAL TEACHING TECHNIQUES.

Stradsklev wrote Handbook of Simulation Gaming in Social Education (1974). Part 1 is a textbook and Part 2 a directory of over 700 "games" to be used in experiential education. In Part 1, he explained the learning theory of experiential education, its goals, and offered practical advice on conducting and debriefing games. His comments appeared to be representative of those offered by many other sources consulted and reflected clearly the advice of one with extensive field experience. In addition, Stadsklev offered a model in which five frequently used techniques were defined; (1) learning games, (2) role playing, (3) instructional games, (4) social simulations and (5) simulation games, according to dominant characteristics and implications of these techniques for experiential learning. (Figure 4.3.) Stadsklev examined, classified and commented on the value and use of these games and techniques.

Their usefulness in experiential learning is obvious.

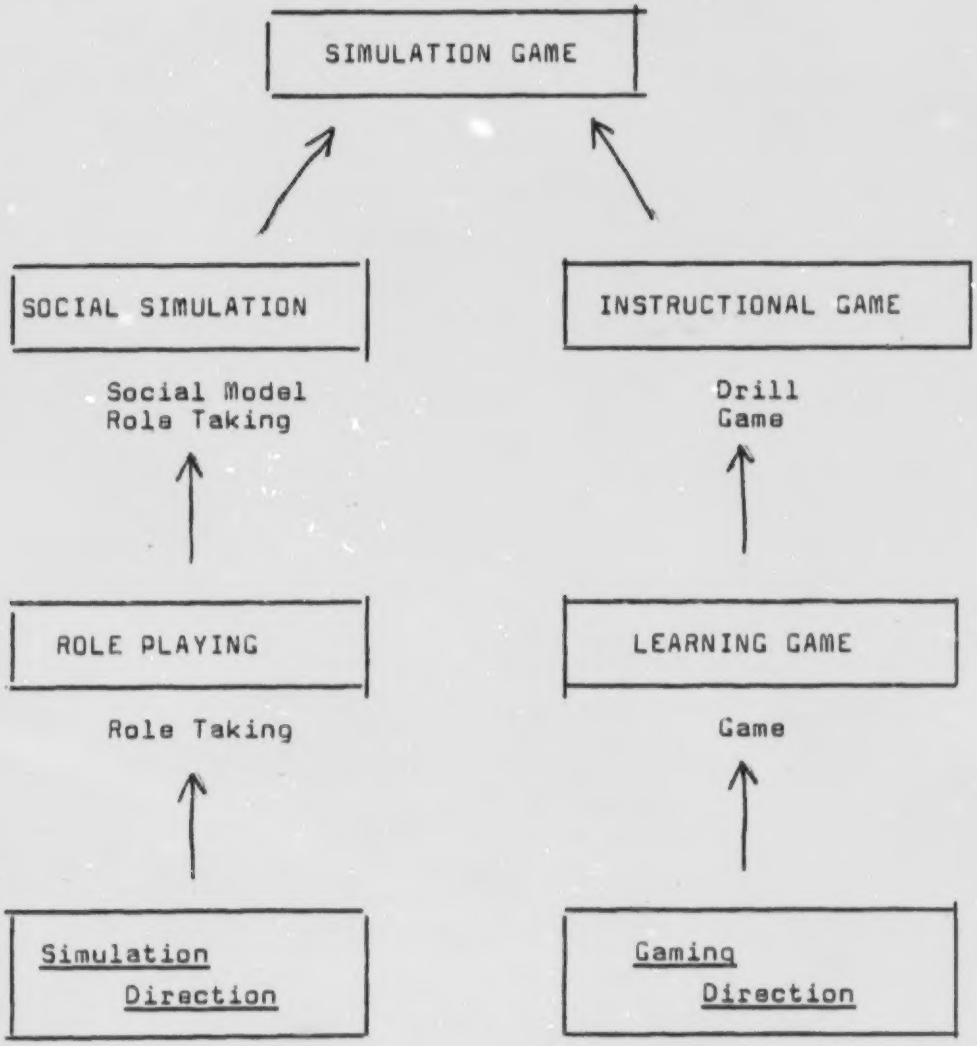

SIMULATION GAME
SOCIAL SIMULATION
INSTRUCTIONAL GAME
Social Model
Role Taking
Drill
Game
ROLE PLAYING
LEARNING GAME
Role Taking
Game
Simulation
Direction
Gaming
Direction

FIGURE 3.3

Autotelic Inquiry Techniques

Source: Adapted from Stadsklev, 1974, page 6.

These techniques are ranked in his diagram (Figure 3.3) in a hierarchy from simple at the bottom to complex as one proceeded to the top and in which techniques on the left side were classified as simulation techniques (Socio-drama) and techniques on the right as games. On the simulation side the participants are involved in vicarious experience and on the gaming side in manipulating concrete objects such as game markers, dice and game boards.

On the simulation (left) side the lowest position was occupied by role playing, in which participants took and acted out roles in a simple scenario. Role playing involved, "...practice or experience of 'being someone else' or of being oneself in a new situation." Moving up from role playing is social simulation. In social simulation the participant takes a role "within the context of a comparatively complex social model of an actual or hypothetical social process." (Stadsklev, 1974, page 7.) Stadsklev noted that it was difficult to know when the simple social scenario graduated into the more complex model of the social system.

On the right side of the diagram one first encountered learning games. Stadsklev gave Clark Abt's definition of a game: "...a game is a contest (play) among adversaries (players) operating under constraints (rules) for an objective (winning)..." Stadsklev added, a learning game was "...any simple exercise which, if effectively analyzed, leads participants to learn something about themselves and their interpersonal relationships." Above the learning game in complexity were instructional games.

> Instructional games present knowledge or information in a gaming process, and one must gain some cognitive understanding of this information in order to function well in the game. (Stadsklev, 1974, page 8.)

In addition to the game elements, learning games had the added element of practice.

At the top of the diagram, Stadsklev placed the simulation game. This position, he felt, represented its complexity, and combination of gaming elements and social modeling.

> A simulation game, then is a sophisticated technique involving role taking within the context of a comparatively complex social model of an actual or hypothetical social process instilled into game form.
>
> What is unique about simulation games is the attempt to merge a social simulation with an instructional game in order to receive the benefits of both techniques in trying to reach the participants and facilitate an autotelic experience. (Stadsklev, 1974, page 8.)

Stadsklev indicated that the five experiential techniques discussed by him, which most people would classify as either a socio-drama or game, are distinguished by the fact that they are experiences in which the activities of the student are self-directed toward a meaningful end. The student becomes engaged in these and wants to do well either because he becomes genuinely interested in it, or it relates directly to a felt need, or it overlies an area of his experience. Because of the self directing, self motivating properties of these techniques he termed them "autotelic inquiry techniques."

As a result of these autotelic techniques students learn through directly experiencing the results of their actions, by coping with their environment rather than by being taught through verbalization.

Stadsklev in his textbook stressed that experiential methods were particularly good for teaching processes rather than content. He noted the techniques were useful for developing

> ...learners, not learned-people who are able to solve problems, make decisions, and find answers; not people who are merely full of information. (Stadsklev, 1974, page 5.)

Stadsklev stressed that, unless the game was properly debriefed, students would not acquire the opportunity to learn how to think:

> ...a good debriefing session can help all participants to become more effective thinkers by providing a structured opportunity to practice the skills necessary for clear, rational thinking. (Stadsklev, 1974, page 44.)

He stressed that unless analytical thinking was used to process the information gained from the experience of playing the game the learning from games would generally not occur.

Stadsklev divided the debriefing of experiential learning through gaming into four parts. The first step was "Experience." After the game the teacher would help the student express what he was trying to do in the game. The student should give an overall statement in which he tried to explain what he was trying to do in the game experience.

The next step was "Identity", in which the teacher would help the students to look at the experience and describe it. They could then, explain the symbolism in the game, try to describe their feelings and reactions, look at facts or other types of data. The teacher might ask questions such as "How did you feel when...?" "What did you say when...?" "What did he do when you...?" These types of questions draw out the experiences of the students.

The third step was "Analyze." The instructor would help the student think about the outcomes, analyze the cause and effect relationships and explore the results of alternative actions. The teacher, after listing data, might ask, "What relationships did you see in this data?" "What problems did you face and how did you attempt to meet them?" "How were you affected by this happening?" "Why did this result in...?" Students could be grouped by the roles they played and asked to discuss the problems and solutions. Solutions which did not occur to individual players were often generated.

The fourth step was "Generalize." In this step the instructor was to help the students draw conclusions that would be valid and help him cope with his environment more successfully. At this point in the debriefing,

> ...the students had generated a great deal of data about what happened in the game, why it happened, how they reacted and felt, and what they were thinking. They are ready now to reflect on that data and draw conclusions about the learning they derived from the game experience. (Stadsklev, 1974, page 55.)

The teacher would assist the students in drawing conclusions from the game and supporting these conclusions by

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citing experiences within the game. They were then asked to consider the applicability of these conclusions in the real world.

Student participation in this phase of the debriefing could be increased by asking for answers to the question, "Anyone playing this game is likely to conclude..." or it could be made a homework assignment in which the student must also validate his answers by using the above model. Sharing conclusions and supporting data would lead to disagreements, especially if the teacher brings these out. Further empirical data for the conclusions would be sought in additional assignments.

The extent of the debriefing would vary with the length and complexity of the game. A simple closed-model game would need no more than a few well-chosen questions to "crystalize the two or three learnings about reality that are built into the model." (Stadsklev, 1974, page 56.) More complex games in which participants have to deal with an overwhelming number of experiences, thoughts and feelings that otherwise might never get sorted out in a meaningful way may be analyzed step by step in the debriefing process outlined above.

Stadsklev provided examples of a variety of other debriefing techniques, all of which were used to challenge students' capabilities to analyze and apply solutions. With each he gave an example of its use with a specific game including model dialogues. These examples included a model of how to identify conflicts and provided a structure to help clarify and resolve conflicts. It included listing and tallying agreement with conflicting conclusions, pursuing documentation through research, and bringing in a type of discussion involving a moral value. The model was designed to focus more on the process of communication and conflict resolution than on content.

Another model of a debriefing process incorporated techniques for surfacing feelings. In "You Said It", participants were encouraged to project their own ideas, personalities and cultural mores into the experience of a game such as _Starpower_. This method stressed the use of direct quotes as data from which groups would develop their conclusions. Still another model illustrated how to use "analytical questions" with a game such as _Ghetto_. These are questions that are close-ended, focus only on conclusions and asked for data to support them. He noted the drawbacks and advantages of not asking the student to deal with the way it was in the real world. Another technique he illustrated was "What's the Question?" Students take turns providing data and having the rest of the class guess the question the data would answer. The data and the conclusions are then shared so that new relationships can be evolved.

A final technique was to show the students a film or give a reading assignment and ask them to list the things that happened in their game that also happened in the film or book.

The gaming and debriefing process evolved by students, requiring the active participation of the student, is of primary importance for the experientially oriented teacher.

To conclude, Stadsklev viewed experiential education as primarily serving to teach processes, that is the learning of analytical skills and how to cope with the environment. He noted that this was learning during the debriefing process and described five steps that ultimately allowed students to validate or seek further evidence for conclusions as well as compare experiences, problems and solutions. The instructor serves as a facilitator for learning, allowing the student to draw his own conclusions, and furnish his own proofs. He is not a dispenser of information and as much as a skilled questioner, and facilitator of learning experiences.

From descriptions that Stadsklev gives of a variety of debriefing processes in which he included numerous dialogues, it is clear that if the classroom is experiential, he conceives of it as a place for dialogue, controversy, challenge, compromise, reality testing, and other activities which are designed to test the students' powers of thought and inquiry.

Stadsklev singled out five types of experiential techniques: (1) learning games, (2) instructional games, (3) role playing, (4) social simulations and (5) simulation games, as noteworthy for their autotelic or self-motivating, self-directing characteristics which are valued in experiential education. He furthermore made generalizations about each one that helped the teacher in providing just the type of experience he wanted for his class.

CONCLUSIONS

This Chapter reviews and summarizes the philosophy and analysis of Dewey, Coleman, Kolb and Stadsklev's works in experiential education. In addition some of their objections to traditional education in its failure to achieve "real learning" have been presented.

Their views yielded a variety of perspectives on the philosophy of experiential education, theories of learning, analysis of the learning process and recommended methods of implementation. Their opinions and recommendations have significant implication for experiential teaching and learning on the community college level, since they present and define what learning is and how it should take place.

Though each author emphasizes different aspects of educational philosophy and methodology there was found to be general agreement that the following steps were necessary for the learning experience and must be understood by the teacher.

1) Action is the key to all learning, therefore the student must be involved in a situation which requires his participation, e.g., gaming, simulation, role playing, etc.
2) The next step is that the student take note of and analyze the various elements of the situation he has experienced. He must be aware of the consequences of his actions and their casual relationships.

3) The above two steps should lead to his being able to make general or abstract principles.
4) He should be able to test his findings by seeking new problems or by the instructor assisting him in structuring new situations, thus returning to action and starting the learning cycle anew.

All researchers agreed that the concept of learning is cyclical in that one starts from the concrete, goes through the various steps and returns to the life situation for new experiences and principles.

What then is the significance for the experiential teacher in these findings?

1) The teacher should conceive of himself as a facilitator, rather than a dictator, who, whenever possible, should use autotelic situations, e.g., those in which the activities of the student are self directed toward a meaningful end. Some situations discussed in this chapter are role playing, social simulation, gaming, and simulation gaming. All of these activities involve active participation on the part of the student.
2) There is a rich variety of situations that the teacher can use depending on what concepts or processes he would like the student to generalize from.
3) All researchers agree that students can only become involved in, can learn from, a situation that he accepts as genuine. Thus, it is up to the experientially oriented teacher to have a true rapport with students so that he or

she can structure role playing, etc., that is meaningful to them.

4) Kolb, Coleman, and Stadsklev, all agree that, unless the student analyzes his experiences, he will not be able to profit from them and thus to apply them. Kolb and Stadsklev provide a variety of techniques for the teacher to use in leading the student to discover and test underlying principles, and emphasize that the teacher should be careful not to impose his views, thus inhibiting the student's response.

5) Dewey stressed the social nature of learning and the other researchers agree that interaction among students is necessary to the learning process. Here the utmost skill on the part of the experiential teacher to keep this a meaningful process is required.

6) Another area that Dewey and Coleman stressed was that, if experiential techniques are used, the student is immediately motivated to succeed and, because he wants to succeed, observes, analyzes, generalizes, tests, hypotheses, seeks new information, etc.

7) All authors agree that there is a probability that principles learned through action, are more likely to be applied and remembered than those learned through traditional information-transmission techniques. Indeed, Coleman states that, though traditional information-transmission techniques resulted in faster learning of symbolically structured information, there is often a

breakdown in the fourth step; to make the transition from that which is known intellectually to that which is applied.

Kolb evolved a theory and method which may have significant implications for the experientially oriented teacher. He postulated four types of learning abilities which are analogous to the four steps that are necessary for complete experiential learning: (1) action, (2) analysis, (3) generalization, (4) application. He noted that people need all these abilities in order for optimum adaptation to reality to take place. However, he realized that individuals will have varying strengths and weaknesses in each area. Thus, one student will be able to immerse himself in action but have difficulty in analyzing, while the reverse may be true of another student. But since a degree of competence is necessary in all areas, it is important that the student and teacher be aware of specific weaknesses and strengths. He developed an instrument which he termed the Learning Style Inventory (LSI). Though there has been some question as to its applicability on the community college level, this author feels that, with some modification, it can be an invaluable tool for the experientially oriented teacher.

The unifying thread underlying the work of all these authors is the assumption that knowledge gained through analysis and testing in experience will result in the type of person who is a learner, not a memorizer. By this we mean someone who will seek new experiences, successfuly analyze and apply principles, be an autonomous person, adaptable and independent, capable of meeting the demands of a continually changing world.

CHAPTER IV

STUDENT CHARACTERISTICS

Since Social Science 101 is a course for both terminal and transfer students, the enrollment will be made up of a cross section of the entire student body. Therefore, the spectrum of needs, goals, abilities, interests and background will present a tremendous range. The Social Science 101 teacher should not expect a homogeneous group. In order to cope with this multileveled group the teacher will need a wide variety of instructional skills.

In order for the teacher to construct a meaningful experiential approach it would be important to investigate the characteristics of the students which teachers will undoubtedly encounter in this course.

In order to find out the characteristics of students attending Miami-Dade Community College - North Campus, for which this study was being prepared, demographic and statistical information was sought. Other student characteristics, such as income, sex, ethnic group, types of programs enrolled in, whether enrolled full or part-time and the number of hours worked, were investigated. Information regarding family educational and economic background was also felt to be pertinent and was sought.

Needs, abilities and interests of Associate in Arts (A.A.) students and Associate in Science (A.S.) students were researched. A major finding was that A.S. students outnumber A.A. students. Academic skills and attitudes of the students found in the community college were also explored. All of the above research was done with the purpose of determining their implications for experiential education.

DISTRIBUTION OF STUDENTS BY SEX

In 1969, 59.9 percent of all students attending Miami-Dade Community College were male and 38.2 percent female. In the Fall of 1975, 55.9 percent were male and 44.1 percent female. (Chart 4.1). Comparison of the preceding figures indicates that the disproportionate ratio of male to female students has disappeared resulting in a nearly even ratio of students.

The ratio of males to females studying for an Associate in Arts, Associate in Science, enrolled in occupational careers, or undecided was also studied. (See Table 4.1.) Women students outnumbered male students only in the A.S. program. Otherwise, the highest proportion of male students were found in A.A. or undecided categories.

TABLE 4.1

Program Enrollments Distributed by Sex of Student Fall Term 1975-76

Program	Sex		Total by Program %
	Male %	Female %	
AA Degree Program	58.4	41.6	31.8
AS Degree Program	48.8	51.2	22.8
Occupational Careers	56.7	43.3	18.1
Undecided	58.4	41.6	27.3

Source: Miami-Dade Community College, November 18, 1975, page 1.

DISTRIBUTION OF STUDENTS BY AGE

In 1970 the average age of all students taking courses for credit at the community college for which this curriculum was designed was 23 (Miami Herald, March 28, 1976, 2D). The average age was 26 by 1976 and in 1970-71 the average age of full-time students was 19. In 1976 it was 23. (Miami Herald, March 28, 1976, 2D).

Palenchak reported that the national median age for all students attending community colleges throughout the country was 27. This statistic was close to the median age of the student attending Miami-Dade Community College (Palenchak, 1973, page 190.) Chart 4.2 which gives age distribution for students attending the North Campus of Miami-Dade Community College indicates that in 1974 less than 35 percent of the students attending were recent high school graduates, i.e., less than 20 years old. (Chart 4.2) Palenchak indicates that it was not unusual for less than 40 percent of the applicants for admission to come from members of the most recent high school graduating class. There was also only a 5 percent difference in the age of Miami-Dade students. It was also found that the mean age of graduates at Miami-Dade Community College for the year 1971-72 was 24.6, with 13 percent being 30 or older. (Educational Research, 1973, page 3.)

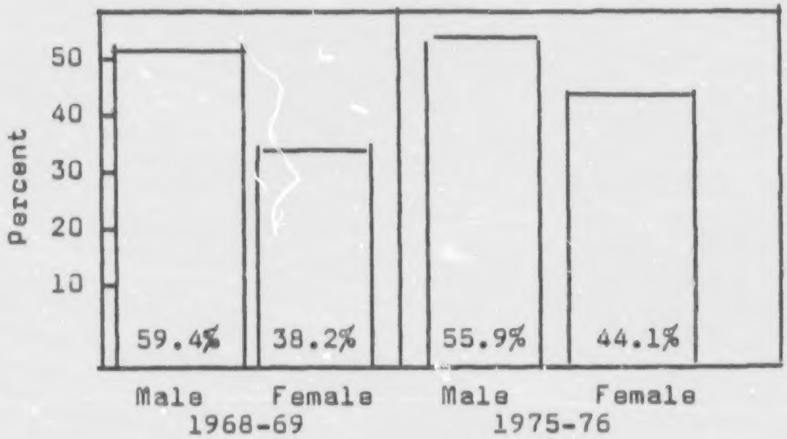

CHART 4.1

Sex Distribution for Students Attending Miami-Dade Community College - North Campus 1968-69, 1975,76.

Sources: 1968-69 Percents - Division of Counseling, Testing and Research, 1971, page 1.
1975-76 Percents - Office of Institutional Research, 1975, page 1.

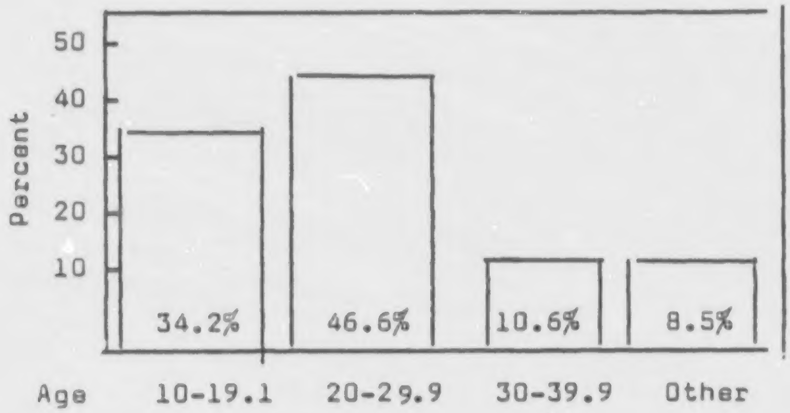

CHART 4.2

Age Distribution for Students Attending North Campus 1974.

Source: Scerba, 1974, page 2, Table I.

The findings for age distribution indicate that students increasingly do not come directly to college after high school. Instead they obtain approximately five years work experience before entering college, thus increasing the average age of entering and graduating students, Bushell (1973) and Palenchak(1973) reported this to be a national trend which is expected to continue into the seventies.

DISTRIBUTION OF STUDENTS BY PART OR FULL-TIME ATTENDANCE

In the Fall of 1976 of the 16,684 students attending the North Campus of Miami-Dade Community College, 47 percent (7,857) were attending part-time and 53 percent (8,827) full-time. (Office of Institutional Research, 1975, page 1.) The number of students enrolled part-time had increased from 30 percent in 1950 to almost 50 percent in 1976. It was also found that 4,635 students or 23 percent of all students attending classes at North Campus of Miami-Dade Community College in the Fall of 1975 were enrolled only in courses that met after 5:00 p.m. (Wenzel, 1975, page 2.) This figure did not include students enrolled in non-credit courses, and the number of students enrolled for classes during peak morning hours in the Fall term of 1974 had declined from the number enrolled in the Fall term of 1971. Thus it was found that 47 percent of the students attending Miami-Dade's North Campus attend part-time and that over 23 percent attend after 5:00 p.m. It was found that the percent of full-time students had greatly declined to 53 percent.

THE NUMBER OF HOURS WORKED BY STUDENTS

Whether students work is of definite significance to the educator, therefore, the author sought data on student employment.

In 1976 only an estimated 25 percent of students attending Miami-Dade Community College said they did not work. In 1970 only 32.9 percent of students who participated in a random sample of ten percent of the entering freshmen and transfer students said they did not work. Thus it was found that a large number of students work. Though data on whether they work full or part-time was not available, several already mentioned findings supported an assumption that large numbers of students held regular jobs. Twenty-three percent of the students enrolled at the North Campus of Miami-Dade Community College attend only after 5:00 p.m. Also mentioned was that the full-time student's average age was 23, while his part-time counterpart's age was 26, and that 47 percent of the students are part-time. It is likely that a high percentage of part-time students have regular jobs.

To conclude, economic reasons have always seemed to be at the forefront of the reasons students choose a community college. It was found that in 1976 only 25 percent of the students said they did not work, and data on the age of full and part-time students, when students attend, and the fact that a full 47 percent of the students attend part-time, support the generalization that many students attending the community colleges not only work, but hold regular or full-time jobs.

DISTRIBUTION OF STUDENTS' FAMILY INCOME

Inasmuch as economics play such an important role in the decision of the student to attend the community college, we felt it significant to research the income of the average student.

The Carnegie Commission on Higher Education found the following national distribution of income for the typical family of the community college student in 1966 as follows: (Chart 4.3). The Commission found the income levels of the students' families fairly evenly distributed among the three middle income brackets. (5,000 to 7,499; 7,500 to 9,999; 10,000 to 14,999). These families' incomes comprised 72 percent of the total students. The incomes of the families of the other students were either below or above this range.

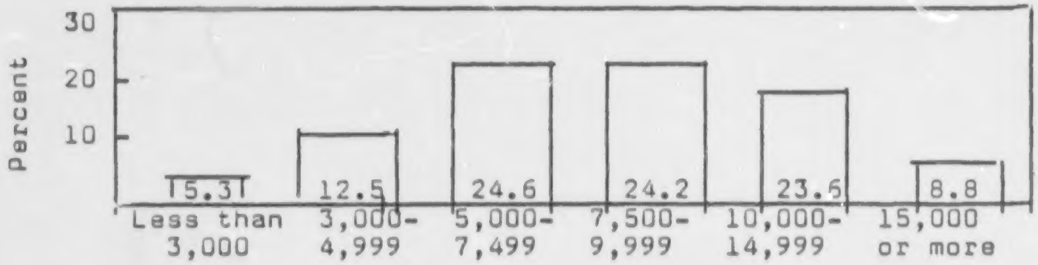

CHART 4.3

Family Incomes of Students in Two-Year Institutions, 1966

Source: Carnegie Commission on the Future of Higher Education, 1700. Chart 3, page 5.

Estimates made by Miami-Dade Community College - North Campus students of their family income were obtained from all students attending in 1969. (Chart 4.4) Students reported their own income, therefore the information is not considered as reliable as the census data used by the Carnegie Commission. Sixty two percent of the students' families earned incomes in the middle brackets (5,000 to 6,999; 7,000 to 9,999; 10,000 to 14,999). Fourteen percent of the families earned more than 15,000, and 6.2 percent less than 3,000.

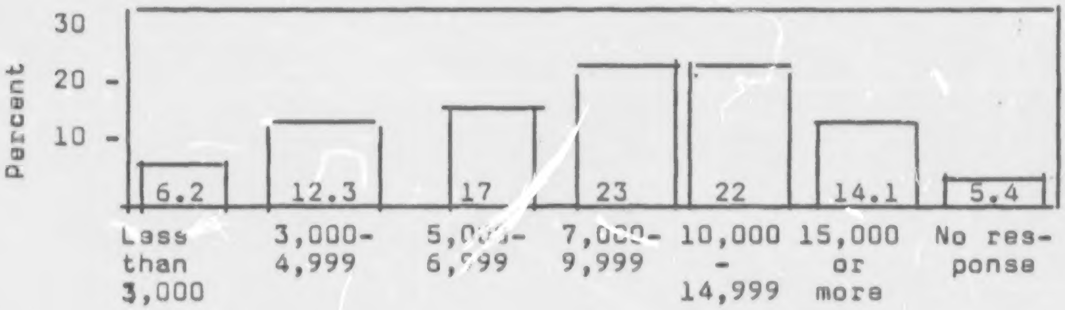

CHART 4.4

Family Income of Students Attending Miami-Dade Community College - North Campus, 1969.

Source: Division of Counseling, Testing and Research, 1971, Table 6.

The number of families reportedly earning less than 5,000 dollars was almost identical in the two reports. (17.8 percent vs. 18.5 percent). Also 14.5 percent of the students attending Dade indicated their families earned 15,000 dollars or more as against 9.8 percent of the national average; a sample used in the Carnegie Report.

Additional information on the medial family income for the students of the three ethnic groups that dominated the enrollment statistics at Miami-Dade was obtained. These figures which were compiled from 1970 census data show that income for black families in tri-ethnic Dade County was only 56.6 percent of that for Non-Spanish speaking white families and that of Spanish Americans 75.6 percent of Non-Spanish speaking white families.

It was found that the overall distribution of incomes of students' families attending Miami-Dade was approximately the same as the national distribution of incomes of families attending community colleges throughout the country.

National norms found above were indicated by the Carnegie Commission to be considerably below those of family incomes for students attending four-year public and private colleges. Thus students for both Miami-Dade and national community colleges come from a considerably lower socioeconomic background than those drawn from public and private colleges.

In a study authorized by the California Coordinating Council for Higher Education (1967), investigation concluded that of students in the state's three segments of public higher education, those attending junior colleges demonstrated the greatest financial need.

Median 1970 income for Dade County black and Spanish-speaking families indicated that their socioeconomic background is even lower than those of white non-Spanish-speaking students. Median income of black families was 5,979 dollars, 56.6 percent of the median income of non-Spanish-speaking whites in Dade County which was 10,563 dollars in 1970. Median income of Spanish-American families in 1970 was 8,091 dollars or 76.7 percent that of non-Spanish-speaking whites. (Profile of Selected Ethnic and Economic Characteristics: Community Improvement Program, Metro Dade County, 1974, Median Family Income.)

EDUCATIONAL BACKGROUND OF PARENTS OF MIAMI-DADE COMMUNITY COLLEGE STUDENTS

Socio-economic level and college success has traditionally been associated with family background. A study by Wolfe (1967) showed that there was a marked relationship between the father's occupation and the student's success in college work. Students from professional and semi-professional families had, it was found, by far the best chance of graduating from a four-year college. The managerial group was second, and the white collar group was third. Sons and daughters of factory workers, craftsmen, unskilled laborers and farmers usually dropped out of school and did not obtain any degree.

The level of education of mothers and fathers of students attending Miami-Dade Community College's North Campus were found for 1969 and are presented in Table 4.2. Students indicated that less than 16 percent of their fathers had a Bachelor's Degree and less than 9 percent indicated the same for their mothers. These findings not only supported the generalization that the socioeconomic and educational level of community college students tends to be lower than those attending public and private schools, but that most students attending the community college are the first of their families to attend college. Sixty-seven percent of the students reported their fathers had a high school education or less and 76 percent reported the same for their mothers.

TABLE 4.2

Extent of Father's and Mother's Education for all Students Attending Miami-Dade Community College-North Campus, Fall Term 1969 - 70

EDUCATION	Mother's %	Father's %
Grade 8 or less	14.0	17.4
Some High School	17.2	16.6
High School Graduate	45.5	34.1
Two years of college	12.0	13.2
Bachelor's Degree	4.3	6.1
Professional training	4.0	2.3
Post-graduate studies	1.4	2.3
Not indicated	1.6	3.0
Totals	100.0	100.0

Source: Division of Counseling, Testing and Research, 1971, Tables 4 and 5.

DISTRIBUTION OF STUDENTS' ETHNIC GROUP

Since there is so much cultural diversity in Dade County we felt it significant to do a study of the various ethnic groups comprising the student body of the North Campus.

Distribution by students' ethnic group was found for the years 1971 and 1975 and is presented in Chart 5.5. The data was obtained from students' health cards, filled out at registration. In 1976 White Americans (Non-Spanish-speaking) comprised 49.5 percent of the student population, Black Americans 20.3 percent, Cuban National refugees 7.8 percent, Immigrant Aliens 11.1 percent and other categories 4.7 percent.

Comparison of percent of student enrollment by ethnic category for the years 1971 and 1975 (Table 4.3) showed the following ethnic distributions increasing: Black American, Spanish American and Immigrant Alien. The proportion of students who classified themselves as White American and Cuban National Refugee decreased.

It was found that the enrollment by ethnic group reflected the tri-ethnic character of the county in which Miami-Dade Community College was located, trends toward increasing enrollment students of minority groups were also found. In 1970 ethnic composition of Dade County was 23.6 percent Spanish American, 15 percent Black and 60 percent "other" (Non-Latin Whites, Orientals and Indians). Community Improvement Program, Metro Dade County, 1971.)

TABLE 4.3

Student Enrollment at Miami-Dade Community College - North Campus by Ethnic Category 1971-72, 1975-76

Ethnic Background	1971-72		1975-76	
	N	%	N	%
White American	11,359	62.3	8,685	49.5
Black American	2,678	14.7	3,572	20.3
Spanish American	783	4.2	1,156	6.6
Cuban National Refugee	1,845	10.1	1,366	7.8
Immigrant Alien	970	5.3	1,942	11.1
Foreign Student On Visa	427	2.4	585	3.3
Other	167	.09	306	1.4
Totals	18,226	99.09	17,542	100.0

Sources: Loscak, 1976, Table III.
Scerba, 1974, Table VIII, page 6.

PROBLEMS AND PERSPECTIVES OF BLACK STUDENTS

It was found that for the past five years increasing proportions of students enrolled at Miami-Dade Community College's North Campus were black. Insight into problems, needs, and interests of blacks was considered important to the construction of a well founded experiential curriculum and to the teaching of blacks.

Knoell found that blacks in several communities attending community colleges were more concentrated in the lowest categories of income, while this was not true of whites attending the same community colleges. Also it was observed earlier that median income of black families in Dade County was found to be 56 percent less than that of white, non-Spanish-speaking families. The evidence warranted the observation that blacks attending Miami-Dade seemed likely to face greater financial problems than whites and were also likely to come from lower socioeconomic levels than their white peers.

Knoell and her associates found blacks received a great deal of moral and financial support from their families, that family attitudes toward their attending college were positive, and that most blacks felt they could stay at home, even though their homes were poor. Many were found living in homes from which the father had absented himself. Family wage earners were women, for the most part, employed in unskilled jobs of the type available to the undereducated black adult. (Knoell, 1970.)

Knoell, as had others, found that the traditional tests of mental ability and academic achievement were heavily weighted in favor of the middle class student and discriminated against those of a lower socioeconomic background. These tests were heavily geared toward the ability to verbalize. Knoell found that on a traditional IQ examination given to black junior high students large percentages fell into the lowest categories.

> Nearly one-third of the black males received very low scores compared with fewer than 10% of the white sampling. (Knoell, 1970, page 178.)

These were examples of the types of test results used to discourage blacks from attending college. Knoell reported correctly assessing or diagnosing learning weaknesses would be a problem for many black students. In her study non-verbal tests yielded best results. She recommended alternative means of evaluation, help for blacks in remedying weaknesses and use of more concrete ways of learning and evaluation.

Though the trend of increased enrollment of blacks from lower socioeconomic groups has not been going on long enough for positive conclusions, it would appear that with the high degree of motivation of black students and their families, their prognosis for upward mobility through education is indicated. In spite of the fact that on the junior and senior high school level their verbal ability has tested lower, therefore they have more difficulty in a traditional academic setting, given the cooperation of the community college,they are apparently staying in school in significant numbers. Evidence from attrition figures indicate the dropout rate for blacks is no more than for other ethnic groups. (Miami-Dade Community College, 1975.)

Knoell (1970) found in a series of interviews that for the average black, college education represents entry into the world of material success that they have so long been deprived of. Most are not interested in the traditional studies of the humanities, philosophy, social theories, poetry, etc. For them college represents the key to a good wage, a secure job, rather than "interesting" challenging job.

PROBLEMS AND PERSPECTIVES OF CUBAN STUDENTS

There is little research relating to Cuban Students. Much of the following is drawn from the researcher's years of teaching in the community college.

It was found that nearly 25 percent of the student population were Spanish speaking, most of these Cuban. The economic income of the Cuban family had been reported as of 1970 as 76 percent of that of the non-Spanish speaking white family. Since that date further economic gains for the 400,000 Cubans living in Dade County has been reported, narrowing the incomegap between the two groups.

Contrary to other ethnic groups, where the young people wanted to merge with the mainstream of American life and shake the traditions of the old country, Cuban youth are subjected to greater stress from their family and within themselves to retain their old values and traditions. We can foresee problems arising in the future over these conflicts. Many of the Cuban families have not accepted America as their permanent home, thinking of their stay here as a temporary one, and this, of course, has affected the attitude of their children.

They are likely to bring to the experiential classroom different perspectives toward democracy, individuality, marriage, women's liberation, the new morality, child rearing, and authority, including the teachers. They also contribute different ideas which have resulted in debates that have opened up new areas of understanding on the part of both Cuban students and other ethnic groups. We can see that a curriculum geared to an experiential, less authoritarian approach may lessen resistance to new ideas.

DISTRIBUTION OF THE STUDENT BY DEGREE PROGRAM

Part of the planning for curricula and learning activities must include recognition of the different goals of various degree programs and the type of students enrolled in these programs.

Figures were obtained for enrollment in the various programs for Fall of 1969 and Fall of 1975. The source for the 1969 figures was the Division of Counseling, Testing and Research, 1971, Table 15, and the source for the 1975 figures was the Office of Institutional Research, 1976, Table 15.

The Associate of Science degree was awarded for successful completion of a two-year program generally designed to prepare students for direct entry into employment.

The programs included were variously called semi-professional, technical, occupational or career courses. In the Fall of 1975 there were over fifty such career programs with students enrolled in them. In addition, there are special programs for occupational careers requiring less than sixty semester hours which lead to certificates and direct employment.

In the Fall of 1975, 31.8 percent of the students indicated they were enrolled in programs leading to an Associate of Arts degree, as compared to 59.7 percent enrolled in programs leading to the same degree in the Fall of 1969. Thus it was found, in 1976, programs in which students were awarded an A.A., suffered a substantial reduction in enrollment.

Comparison between the percent of students enrolled in programs leading to the A.S. degree indicated little change between 1969 and 1975. In both years about 23 percent of the students indicated they were seeking an A.S. degree.

Further comparisons of the enrollment figures for 1969 and 1975 indicated a substantial increase of students indicating their intent to pursue courses in occupational careers and special programs. Twenty-nine percent of the students were enrolled in these technical programs in 1975 as opposed to approximately nine percent in 1969. This indeed was a significant increase.

Analysis of the figures of 1969 and 1975 revealed a large drop in enrollment in the A.A. degree program, a substantial increase in the technical programs and a relatively stable enrollment in the A.A. degree program.

The community college teacher must keep in mind that a large number of students are not certain about their career plans and that an important function of the community college is to provide an opportunity for students to try out different programs and assist them in making their career choices.

No empirical data was available from Miami-Dade's North Campus on transfer between programs and other withdrawal information. Discussion with academic advisors and counselors did, however, reinforce the idea that the rate of transfer between programs and withdrawal from school and/or programs was high and National studies were found that confirmed a high withdrawal rate. Clark (1960), for example, reported that many transfer students failed to transfer and suggested the reason was that students discover a discrepancy between aspiration and ability. He stressed the essential task of the community college was to help students examine their ability. Meyer (1968), too, found that many students were prone to select majors and programs for study which demanded a higher level of skill than they were capable of demonstrating.

It was also found that many students who got a terminal degree or where in terminal degree programs, did indeed go beyond their original two year expectations.

Wenzel and Corson (1973) surveyed the 1972-73 graduates of Miami-Dade Community College and found that, consistent with previous years, the vast majority of graduates who answered their survey planned to continue their education beyond the level which they had completed. They found at least twenty percent of those who had earned an A.S. degree planned to pursue their education. Data from a study conducted by the College Entrance Examination Board in 1968 paralleled the Wenzel and Corson study. Eighty-five percent of the students in college parallel programs, 43 percent of students in technical programs, and 21 percent in vocational programs hoped to transfer. (College Entrance Examination Board, 1968.)

Discussion with an administration official indicated that probably sixty percent of the entire student body enrollment at Miami-Dade College pursued further education either transferring or graduating from Miami-Dade. This figure was based on the assumption of an earlier finding that the total transfer rate was approximately double the graduation rate. In 1961 the graduation rate was 18 percent, and the transfer rate believed to be 30 percent. In 1972 the graduation rate was approximately 32 percent.

EXPECTATIONS AND GOALS OF ASSOCIATE IN ARTS AND ASSOCIATE IN SCIENCE STUDENTS

Thus it was found that the community college attracted a great many more students into occupational programs than had formerly been the case. The number of students in transfer programs and students with distinct needs and interest from those that had transferred, declined to about a third of the student body. High transfer rates between programs were noted both on the local and national levels, underscoring a primary purpose of the community college which is to help the student find his areas of interest and ability and to provide an opportunity to pursue education in a wide variety of programs.

It was found that increasing numbers of students are career or occupationally oriented. Only a third of the students enrolled in the general education interdisciplinary social science course were likely to be pursuing an A.A. degree.(From now on A.A. students will be designated as transfer students and A.S. students as terminal students). Findings regarding differences between A.A. and A.S. students in the areas of personal and educational background, attitudes and aspirations were sought. Most of the information was gathered from students directly out of high school, though some was obtained from those enrolled in the community college.

Findings in the area of academic ability showed that men in terminal programs consistently scored significantly lower on tests of academic ability than those in transfer programs. Similar differences were not found for women transfer and terminal students. Brue (1971) and Fenske (1969) found that a large proportion of underachievers among the terminal students scored high on academic achievement tests in high school but had low grade averages.

It was also found that transfer students made higher grades despite lower academic test scores and high school grades. (Brue, 1971.) Both groups included a wide range of academic ability and income levels. Economic status was not found to be a good predictor of academic success. Academic performance of transfer students from low-income families was as good as those from higher socioeconomic status. (Wilhelm, 1969.)

However, the expectations for length of education was less for those in lower socioeconomic groups in both the terminal and transfer groups, with the terminal groups expecting fewer years of education than the transfer group. Brue found that two thirds of the students in the occupational group expected less education than they desired. This was due primarily to limited family resources. Only a third of the transfer group expected the same. (Brue, 1971.)

Research in which each group rated their own abilities yielded the following results: (Brue, 1971) terminal male students rated themselves higher on mathematical and mechanical ability. Transfer male students rated themselves higher in communication skills. Terminal and transfer women students were found different from each other in only two scales, artistic and social orientation. Brue's evidence suggested that male transfer students were more sensitive and socially oriented. (Brue, 1971.) He found occupational students more realistic and practical. Occupational men rated themselves higher in skilled and technical areas, transfer men in communication, service, leadership and artistic skills. (Brue, 1971.)

Personality characteristics and attitudes of transfer and terminal students were found to be different. The College Entrance Program showed that occupational students were twice as likely as transfer students to set the objectives of education as mostly or entirely job training; most of them planned to concentrate on learning things that would be useful in their future work. (College Entrance Examination Board, 1968.)

To summarize, the findings on the difference between transfer and terminal students in view of their self image, terminal students valued security, saw their role in society as job oriented, followed established patterns, and had lower educational expectations. Transfer students tended to be more idealistic, envisioned their work as fulfilling and sought higher, though somewhat vague goals for themselves. In fact, both groups were not precisely sure about the programs they were choosing. These findings were applicable to the group applying for admission directly from high school, a group consisting of only 35 percent of the Miami-Dade's student population.

INTELLECTUAL ABILITY OF COMMUNITY COLLEGE STUDENTS

Wolfe (1954) found those who go to community colleges more intelligent, on the average, than those who graduate from high school and do not go to college.

Koos (1970) found that the community college student averaged lower in intelligence than those students in most four-year colleges, with some students on a par with the brightest in four-year institutions, but with a larger proportion in the lower ranges of the distribution. Cross (1969) determined the clientele of the community college represented the following distributions: 20 percent from the first quartile of academic ability, 63 percent evenly distributed over the second and third quartiles and 17 percent from the fourth quartile.

Percentile distributions for Fall 1972 entering Miami-Dade freshmen scores on the Florida Twelfth Grade Test (FTGT) of academic ability were almost identical to those found by Cross (1969) for her measure of ability. Approximately 60 percent of the students scored between the 80 and 20 percentiles of the FTGT. Twenty-one percent scored 25 or lower and 20 percent scored 80 or better.

Students who scored less than 75 on the FTGT were usually denied admission as freshmen to state four-year institutions. Thus on the basis of their FTGT, some 80 percent of Miami-Dade Community College students would be denied admission to most programs offered by public four-year and senior institutions.

A report which gave a statistical breakdown of total scores for the FTGT or the School and College Ability Test for 85.5 percent of the graduates of Miami-Dade Community College graduates through June 1969, indicated that Miami-Dade graduated a large number of students who might do satisfactory upper division work but who would probably have been denied admission to a state university upon graduation from high school due to the cut-off score of 300 on the FTGT. (Miami-Dade Community College, Research Department, 1971.) Some Florida schools had cut-off scores as high as 400. Thus it was found that the community college's open door admission policy resulted in admitting students denied entrance to state institutions and whose test scores indicated they had only average or below average academic ability. Findings indicate that many of these students would be capable of doing upper division work inspite of their poor showing on the FTGT.

The FTGT measured verbal and quantitative ability, not other types of abilities or skills. Students attending Miami-Dade Community College could also have been denied admission to four-year institutions for lack of a high school diploma (approximately ten percent of Miami-Dade students did not have one) and/or lack of required college preparatory courses.

SPECIAL ACADEMIC CHARACTERISTICS OF COMMUNITY COLLEGE STUDENTS

Findings indicate clearly the Community College attracts students representing a wide range of academic potential and achievement and environmental backgrounds.

Moore (1970) referred to the students who attend the community college as high risk students who have little change of achieving academic success in traditional colleges. Collins and Collins (1966) estimated that from 30 to 50 percent of students enter the open door college in need of basic skills required for college study.

It seemed necessary to learn more about these and other students whose tested academic aptitude was lower than that of students admitted to state institutions.

THE REMEDIAL STUDENT

The first type of student on which information was gathered was the remedial student. Students are classified as remedial by scoring at or below a given percentile on a standardized achievement test and/or a particular high school rank, and/or grade point average. At Miami-Dade Community College the academically unprepared or remedial student has been determined by a score of less than 23 on the FTGT. It was found earlier than in 1971, 21 percent of the Fall entering freshment students attending Miami-Dade scored less than 21 on the test. Later figures were not available, since the FTGT test is no longer required for all entering students.

A special program for the considerable numbers of remedial students does exist at Miami-Dade but it is voluntary and only a small number of such students participate. It is likely then that the teacher of social science 101 will have remedial students in his class. Also, the Director of Testing and Research at Miami-Dade Community College studied the remedial program offered by Miami-Dade during the Fall term of 1967-68. His findings indicated that the purported benefits of the remedial reading and writing program provided by the college did not provide new participating students any significant academic advantage over similar new students who did not participate in the remedial program. (Losack,1971.) Other studies also supported the findings that most new students in remedial programs do not reach higher achievement levels than similar students in regular courses. (Sharon, 1970, Dispensieri, et. al., 1971.)

Losack, Jefferson and Sutton (1970) examined students classified as remedial who volunteered from a group of students that scored below the twenty-first percentile on the verbal section of the School and College Ability Test. They found that on the individually administered WAIS, 93 percent of those students obtained a full scale intelligence quotient of average or above, in spite of their earlier low scores on the FTGT. Wide differences on subtest scores were noted as were inter-group differences with respect to sex and ethnic background. Their findings indicated that most students who elect to attend the community college do have the ability.

The authors found their subjects had a variety of other problems. Three fourths of the remedial students were found to have personality and emotional adjustment problems of varying degrees. At least a third showed moderate anxiety and another third moderate to severe ego defects. Counseling and psychotherapy were recommended for a large part of the remedial population of the Community College. They noted that,

> ...52% have the potential to function at a higher level if significant psychological and/or environmental factors inhibiting

> academic performance can be isolated and appropriately dealt with. (Losak, 1970, page 37.)

The Miami-Dade group also determined that at least 16 percent of the remedial population they examined did not appear to have the potential for attending academic or vocational success at the community college. They made these judgements through a balance of findings on the cognitive and emotional functioning of their subjects.

In another study, the Task Force on Testing for the State of Florida (1966), set out objectively to describe the characteristics of those students who come to the open-door public junior college academically underprepared. The results of the study supported a hypothesis of the Losak Study that the use of only traditional academic achievement tests narrowly circumscribed the academically underprepared and failed to distinguish among many academic subgroups. The students of the Losak study were found to have a variety of different problems requiring differential diagnosis and placement.

They classified their remedial population into four subgroups.

1) By far the largest subgroup functioning at a low level has psychological disabilities. Counseling or psychotherapy was considered essential for 40 percent and it was judged that an additional 32 percent could probably profit from it. In other words, approximately 72 percent of remedial students do not function well academically not due to lack of intelligence but to emotional problems;
2) 16 percent were found to be functioning at a low level

primarily because of limited intellect;

3) those who have neurological and/or organic involvement; and
4) those who have a cultural background different from the majority of students attending the college. (Losak, 1972.)

Losak and his associates believed that the remedial students could succeed if modifications were made in the curriculum. They recommended differential diagnosis and placement using several tests. These tests included:

1) a measure of verbal and non-verbal aspects of intelligence,
2) a measure of anxiety,
3) an evaluation of overall emotional adjustment,
4) a measure of academic skills,
5) a measure of organicity.

They further recommended some form of psychotherapy for those who evidenced psychological problems and a multisensory approach for the high percentage of the population who appear weak in verbal ability. The many students they found weak in generalizing and abstracting ability were directed into relatively non-verbal areas and provided enrichment and survey type courses geared to a lower level.

In an earlier study, Losak stressed only a handful of students entering the junior college "academically underprepared" may be expected to be "assisted" in the traditional sense. The others must have available the different experiences and goals prescribed above provided by a curriculum that is relevant to them as individuals.

THE NON-TRADITIONAL OR NEW STUDENT

Information was obtained on characteristics of "marginal" students. These students may include the remedial student, but they need not score as low on tests of academic ability. He is commonly classified as having graduated from the lower third of his high school class. He has been attending the community college in increasing numbers and it is believed brings with him outlooks and experiences not common to the college student enrolled in the past. This student has been called the non-traditional or new student.

As with the remedial students, low intelligence was not found to be the most important reason for his lack of success in school. Cross ranked low intelligence as the least important of seven variables as a major obstacle to learning of the new student. Also, in most cases the student lacked the skills to be successful in taking culturally-biased, standardized examinations. Such a finding was also reported by Knoell in her work with black students. However, over half of the new students are believed to be caucasian.

An important reason for the lower level of functioning of these students could very well be lack of confidence in their own ability which contributed to them lack of academic success.

Data from Austin and his associates (Austin, 1967) showed that junior college freshmen were less confident than four year college and university freshmen on academic, leadership, mathematical and writing ability traits as well as on motivation to achieve and intellectual self-confidence. It was found that, when asked, the typical Miami-Dade student attending the North Campus also felt weak in the areas of math and reading and a number of other skills.

While results were to be weighted against the tendencies for students sometimes felt to be less than candid when filling out self-report forms, 16.5 percent said they were "weak" in reading, 11.7 percent in arithmetic, nearly 9 percent in writing skills and almost 40 percent in study habits. Many of these students lacked confidence in their potential for academic success. Tillery and Sherman (1966) found that 71 percent of students who went to independent universities definitely believed they could do college work, 71 percent of the public junior college students had doubts about their capabilities. Tillery (1971) expressed his opinion that many of the junior college group who said they "probably had the ability" were expressing over-confidence. Tillery and Sherman (1966) also found that 38 percent of the high school seniors who scored in the lowest third admitted that they often felt nervous, tense, or shy in class as compared to 21 percent of the high achieving students.

The "new" student was found to lack interest in intellectual pursuits and to prefer non-cognitive activities. On the intellectual disposition scale of the Omnibus Personality Inventory marked differences were found between the top third and bottom third high school seniors. Fifty-nine percent of the traditional college students scored in the top third on this scale of intellectual and scholarly interest compared to only 16 percent of the new students. (Cross, 1967, page 12.) On questionnaires which measured passivity, the new student scored quite high in contrast to the traditional student. (Cross, 1972.) This was attributed to his academic failure prior to attending the community college. Students who had experienced failure in high school were more apt to believe that regardless of how hard they tried they would fail.

Koos reported that review of the large-scale study of plans of junior college students (in California) showed a major portion of students of lower ability to be unrealistic in their choice of career plans, or without choices altogether.

Another finding was that over two thirds of the students who scored in the lower third of academic aptitude tests were found to be first generation college students; their fathers never attended college (Cross, 1971). It will be recalled from earlier findings that approximately the same proportion of fathers of Miami-Dade students never attended college either. The new student also often came from the lower, middle or working class family as did the majority of Miami-Dade students.

Bernstein (1966) commented that the disadvantaged student was not likely to possess the elaborate linguistic codes required for precise conceptualization. They would be at a disadvantage when competing with middle class students who were more likely to have higher individualized language skills and thus a greater breadth and range in thought.

Bernstein wrote that:

> Middle class children become accustomed to elaborate communication codes before entering school. Reinforcement in the home and acceptance in school, serve as incentives for their continued use. Lower class children, on the other hand, tend to utilize restricted communication codes that are different from those accepted by the teacher and that lead to discouragement and negative attitude toward school and what it has to offer. The end result is that both the child and the teacher have difficulty in communicating with each other. Often they use different speech patterns and symbols to refer to the same objects. These differences accentuate the learning problems of the children. (Bernstein, 1966, page 121.)

Cross (1971) found unquestioning acceptance of authority and authoritarian values consistently related to lower ability, lower educational achievement and lower socioeconomic status. She found lack of autonomy in thought and judgement and agreement with statements that emphasize the virtues of hard work, determination and ambition characteristic of this group.

Cross reported that the "new" student preferred physical action-oriented modes of learning, the application of ideas to life situations, rather than the manipulation of abstractions and preference for having problems explained rather than figuring out problems for themselves. (Cross, 1972.) She stated these students stopped listening to lectures and failed to put forth their best effort.

The "new" student and the remedial student were found to have in common low functioning on standardized achievement tests and low test scores. Both types of students come to the community college lacking in certain verbal and conceptualization skills and in self confidence. Larger numbers of the new students come from middle to lower socioeconomic groups and from homes where parents had not gone beyond a high school education.

In spite of the commonalities found above, neither group was found to be homogeneous, but rather heterogeneous in terms of specific weaknesses in the areas of psychological and intellectual functioning.

Academic and personal guidance is important for both groups of students. Many were found to have unrealistic pictures of their potential or limitations and that they will need help in determining their strength in achievement and future goals. Instructors would have to take into account that both remedial and new students had failed in traditional academic settings. New students were found to have somewhat authoritarian, anti-intellectual attitudes, to prefer to have their problems broken down for them and to have non-academic vocational appreciation and interests.

It is likely that the non-verbal approach and the emphasis on experiential education will be of great benefit to both groups and that the instructor will have an interesting challenge in using the experiential approach. This approach should be of significant benefit in assisting them to achieve greater emotional and intellectual independence. It will also be of benefit in helping them develop abstracting and generalizing skills. Active involvement through such techniques as game playing, value clarification, role playing and simulation should help in overcoming passive acceptance of authority as well. It is also a method that appeals to their desire to be directly involved with a learning situation rather than abstractly through symbols.

SUMMARY

This chapter presented characteristics of students believed to be of importance in developing a plan of experiential instruction and curriculum for community college students enrolled in a general education interdisciplinary social science course at a large, urban community college. (Course SSS 101.) These findings will be helpful in facilitating the teacher's role in preparing for and presenting Social Science 101. Research in the literature pertaining to students enrolled at Miami-Dade has provided evidence to show that:

1) The student electing to go to Miami-Dade Community College - North Campus, has a wide variety of reasons for attending. Some pertain to purely economic and career considerations, others to the fact that they may not gain admission to a four-year or senior institution.

2) A great many students at Miami-Dade, North Campus, probably the vast majority, hold regular, full-time jobs. Only 25 percent of the students at Miami-Dade say they do not work at all. It can be assumed that students who work have limited time for academic study and would appreciate gaining knowledge that will be "useful" to them, rather than theoretical and abstract.

3) Ten percent more males than females attend Miami-Dade Community College's North Campus. Women students outnumber men in occupational-career programs, suggesting perhaps some women have unrealistically low aspirations in relation

to their abilities. This suggestion is supported by national findings that women in occupational programs and women transfer students differed little in academic ability. This is in contrast to findings for male students that indicated male transfer students did have greater potential for academic achievement than male terminal students.

4) Only a third of the students at Miami Dade's North Campus pursue a transfer degree. Nearly two thirds are in programs in which the goal is immediate employment in specific fields on completion. The teacher of experiential education must take into account the fact that transfer students have different objectives and needs from students in associate in science and other occupational programs. Some of these differences are given in national findings.

5) Regarding minority students attending Miami-Dade, slightly more than half the students were non-Spanish-speaking white, a third Spanish-speaking and 20 percent black.

6. Cuban students are confronted with cultural conflicts that they may bring with them to the social science course. Of significance to the teacher wishing to use experiential approaches, is the fact that many Cuban students are believed to prefer more authoritarian and verbal or non-experiential approaches to teaching. This finding is based on the researcher's experience and has not been validated by research.

The findings in this study are drawn from research found to be common for both students attending Miami-Dade Community College's North Campus and community colleges throughout the country:

1) Students drawn to the community college come from a variety of socioeconomic groups, but mainly from families of average economic means and low educational level. More than 60 percent of the parents of Miami-Dade students have less than a high school education. Studies indicate that students whose parents have no better than a high school education are likely to experience difficulty succeeding at a four-year institution.

2) Approximately 35 percent of Miami-Dade students attend college directly after leaving high school. However, the age of the full-time student averages out to 23, meaning that many students come back to the college after a few years of work experience. These facts, though corresponding with national findings, are surprising in that they are at variance with generally accepted national views that the community college student comes to the school right after graduation from high school.

3. The majority of students (65 percent) were older than 19. The author's years of teaching and experience has indicated their motivation is primarily material. They feel they have reached a "dead end" economically and seek further education as means of attaining economic success.

4) Percentile distributions by academic ability show that

Miami-Dade students conform to the national distribution by quartile of academic ability. Approximately 20 percent of the community college students are found in the lowest quartile, they are considered remedial, ill-prepared for college work, while 20 percent fall into the top quartile, the quartile that four-year and senior institutions draw from.

5) Many "new" or non-traditional students who are admitted to the community college are known to be and see themselves as deficient in various learning skills, such as studying and verbal skills (reading and writing). These students do not score as low or qualify in other ways as remedial students. They have not done well in their high school academic programs and continue to lack confidence in their ability to achieve in a traditional educational program. These "new" students tend to feel shy or nervous in class, tend to have parents who have never attended college, and do not have academic interests. They are often found to lack autonomy in thought and judgement, to be job oriented, to prefer application of ideas rather than discussion of ideas.

6) Many of those who are classified as remedial students do not lack the intelligence to do college work but are in need of psychological counseling. Complicating the problem of helping the remedial student is the fact that many academic subgroups are noted, each amenable to different learning approaches and curricula. Some are weak in

verbal skills and/or generalizing and abstracting skills and/or they may be weak in a variety of perceptual skills. They show a diversity of inadequacies and would therefore benefit from programs that are tailored to the particular needs of the various subgroups as indicated by differential diagnosis using a variety of tests. It can be seen that this group places great demands on the community college teacher.

7) Black students generally come from families with lower incomes, and are likely to be facing greater financial problems than white students. While their attrition rate at Miami-Dade is no lower than the attrition rate for other groups of students, they are likely to face linguistic problems and do not perform well on verbal tests of achievement which lie at the heart of the traditional academic curriculum. In view of their non-verbal background, they should do well in the experiential approach to learning. As with other groups their motivation for attending the community college is to achieve success. They are interested in qualifying for a job rather than in self-fulfillment or learning for its own sake.

8) Male students in terminal programs rate themselves higher in mechanical, mathematical, and technical abilities than transfer males who rate themselves higher in communication, service and leadership skills. Terminal men are more realistic and practical, more oriented toward

the family, consider education as training for a secure job and are interested in application of ideas. Transfer students are found to be more idealistic and more interested in self-fulfillment.

9) Transfer and terminal students directly from high school were found to be somewhat unsure of the programs they were choosing. Terminal students, particularly, tend to decide at a later date than transfer students enrolled at the community college.

10) National and local findings indicate that one of the most important functions of the community college is to allow the student to discover his areas of interest and ability and to assist the student in making career choices. Students do often change their minds and their career choices after community college and acquire more realistic pictures of their strengths and interests. The community college teacher must facilitate the process of feedback and choice. He should assist the student in "finding himself.

From the above generalizations it is clear that the planning of a curriculum of general education, Social Science 101 Course should take into account the fact that a majority of the students would appear to desire as well as benefit from more concrete, non-verbal ways of teaching. The practical and non-theoretical should be emphasized as a means of presenting and applying subject matter. The teacher should also be sure that the student is given the opportunity to realize and remediate areas of skills where he is deficient.

CHAPTER V

LEARNING PREFERENCES AND CHARACTERISTICS OF STUDENTS RELATED TO INSTRUCTIONAL TECHNIQUES

In this chapter information was sought regarding students' feelings about their education, preferences of students for instructional styles and conditions, the cognitive styles and other characteristics of students as related to their preferred instructional style, and the effect of matching both cognitive styles and other student attributes with methods of instruction.

Two major questions considered in this chapter are: What were the community college student's preferences regarding instruction? How do student characteristics regarding methods and styles of instructions interact with the teacher who holds an experiential philosophy of teaching and learning?

The premise was that the community college instructor would be able to teach more effectively when he had insight as to his own instructional preferences and dislikes and those of students. Analysis, using a greater variety of variables than merely comparing relative merits of teaching techniques, such as interaction between student preferred learning modes and cognitive styles has yielded meaningful results.

Students' expressions of academic preferences in regard to a variety of teaching techniques were also sought. The results of national surveys representative of all students attending community colleges as well as Miami-Dade Community

College's North Campus are reported and conjectures made.

EXPRESSIONS OF ACADEMIC NEEDS MADE BY MIAMI-DADE STUDENTS

In a major study conducted by the Needs Assessment Task Force (1974), a representative group of Miami-Dade Community College - North Campus students were visited in their classes by teams of researchers and polled on their unmet needs. The classes were broken in small groups of 5 to 10 persons and a team member assigned as a recorder in each small group. Among the tasks members in each group had, was to respond to a trigger statement asking for unmet needs. These were later ranked by the group. Sixty-one groups totalling 432 students participated in the study. Over 1300 responses were received and ranked:

> ...preference for new techniques/challenge/relevancy to major/student participation... propelled it into the top ten unmet needs.

Students in the above study frequently requested more class discussion and participation, more variety in teaching methods and materials, more communication between students within classes, more relaxed classroom atmosphere, more practical work and closer relationship of courses with major fields. The committee found that students:

> ...ask for increased and improved guidance toward educational and vocational goals, and they look to M-DCC to provide varied and open-access programs to reach these goals with courses taught by competent and student-oriented instructors. They ask to evaluate and choose their instructors and indicate that desired teaching strategies would be challenging and student-involving, but that at the same time attendance policies would

> be less rigid. The proglems of obtaining current and reliable information are pervasive, as are financial problems.

In short, it was found that students desired less passive and more participative approaches to the classroom experience.

NATIONAL SURVEY OF ACADEMIC EXPERIENCES

A survey designed to probe the academic and college experiences of community college students throughout the nation was conducted by Roelfs and Warren (1973). It was developed through compilation of views expressed by large numbers of faculty, administrators and students. The compilation of views encompassed a number of colleges and was later administered to 6,500 students at 27 two-year colleges. The authors grouped the items according to the way students perceived issues that were felt to describe accurately particular community college experiences. The students polled were fairly representative and included part-time and full-time students, evening and day students, vocational and academic students.

More than half the students in any age group felt they were neither doing very poorly nor very well. At least a third of the students under 30 felt they were experiencing academic difficulty. (Table 5.1) Academic difficulty was defined as being left behind in the course, unable to comprehend what was being taught and having an instructor who explained things in a way they could not understand.

TABLE 5.1

Percent of Students Indicating They are Having Academic Difficulty

Age Group	No	Yes
10 - 21	10%	37%
22 - 29	15%	30%
30 plus	28%	19%

Source: Roelf ,1975.

Roelf reported that only one in a class of 20 students, all under 22, "would express great satisfaction with what he or she is learning from the instructor." (Roelf, 1973, page 9.) He also indicated that class members would probably reveal they were frequently bored or unchallenged by the material presented or by the instructors handling of it. Roelf indicated that if the same class were composed of students in their 30's or older it would be likely that at least five of them would be pleased with classroom instruction. The majority would have few complaints about materials or instructor contributions. Roelf found that older students had a more realistic picture of their talents, physical stamina and mental capacities.

Their most serious problem was likely to be underestimating their abilities.

In other words, on a national scale, students younger than 22 were often dissatisfied with traditional material and ways of teaching, while students over 30 were found less likely to be experiencing academic difficulty and more satisfied with traditional methods.

TEACHING TECHNIQUES AND LEARNING CONDITIONS PREFERRED BY STUDENTS AT MIAMI-DADE NORTH CAMPUS

Conclusions emerging from various research studies indicated that learning conditions, when matched with student preferences, do produce differential learning achievement. (Travers, 1974, page 1035.)

Scerba (1976) used Canfield and Lafferty's Learning Styles Inventory (1974), hereafter referred to as LSI, to survey preference for instructional styles and instructional conditions of students at Miami-Dade Community College's North Campus. He administered the inventory to 795 students in randomly selected English and Humanities classes at the college, a sample representative of the entire student body.

The inventory consisted of 30 items. Each item required the person taking the inventory to read four options and to rank options in the order in which they described their preferences or feelings. It was an untimed instrument and could be completed in about 25 minutes by the typical student. Ranking sets consisting of four items forced the students to state their preferences for four learning activities: listening, reading, iconics and direct experience. With all scales, the lowest possible score for any scale or category was 6. When a 6 appeared, it would mean that the student consistently picked that response as the most desirable or descriptive.

Of more than 700 students surveyed, 35 percent chose direct experiences, 25 percent listening, 25 percent iconics and 15 percent reading. It was found students would rather learn by direct experience or actual contact with materials. Large numbers ranked reading as the least preferred mode of learning. These expressed a high preference for the auditory channel of learning and for seeing concepts and their interrelationships in visual rather than verbal symbols.

Student responses to twelve other scales on the LSI were also obtained. Eight scales dealt with conditions of learning. Canfield and Lafferty's premise was that these scales were based on varying motivations that would interact differently with various environmental conditions. The authors state that,

> About two-fifths of the times(of the eight scales) are designed to measure student motivational qualities. The items are phrased in terms of typical classroom or instructional situations and are oriented around four major motivational areas of affiliation, eminence, structure, and achievement. (Canfield and Lafferty, 1974, page 2.)

There are eight scales and four subgroups in the LSI. It should be noted the higher the score the less distinctly the student expressed preference for the particular learning environment. They are presented in terms of Affiliation, Structure, Achievement and Eminence. (Table 5.3.)

These four subgroups and related subscores reflected aspects of the conditions under which students learning can be controlled by the teacher.

TABLE 5.3

Learning Conditions Preferred by Students at Miami-Dade Community College - North Campus

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Affiliation : Friendly Warm, supportive relations with others.

1. Affiliation: 15.5. Preference for good rapport with fellow students.
2. Instructor: 13.6. Desire for informal relationships with instructor.

Structure : Logical, orderly, well-defined and clear study plans.

3. Organization: 11.2. Logical sequence of material and systematic presentation.

   Detail: 12.9. Preference for precise information about all details of course.

Achievement : Independence of action, pursuit of one's own interests.

5. Goal Setting: 15.5. Preference for setting own goals related to interests and capabilities.
6. Independence: 16.7. Preference for working independently and choosing means of accomplishing goals.

Eminence : Comparison with others, competing for recognition, desiring classroom discipline and order.

7. Competition: 18.1. Desire for comparing performance with others.
8. Authority: 16.6. Desiring informed, knowledgeable instructors who clearly control the classroom.

Source: Scerba, 1976.

Though the differences in scores are believed to be significant, statistical tests of significance have not been made against the scores, thus the items are merely ranked by the means associated with each item in order of those conditions students most preferred (lowest score) to least preferred conditions (highest score). (Table 5.4.)

TABLE 5.4

Rank Order of Learning Conditions Preferred by Students at Miami-Dade Community College - North Campus

1.	Organization	(11.2)	Desire for logical, clear study plans and coverage of material.
2.	Detail	(12.9)	Desire for detailed information on all aspects of the course.
3.	Instructor	(13.6)	Desire for friendly, personal, informal relationship with instructor.
4.	Affiliation	(15.5)	Desire for development of warm interpersonal relations with other students.
5.	Goal Setting	(15.5)	Opportunity to establish one's own objectives and goals.
6.	Authority	(16.6)	Desire for a well controlled and formal learning environment.
7.	Independence	(16.7)	Desire for working independently.
8.	Competition	(18.1)	Desire for competition and comparison with others.

Source: Scerba, 1976.

The largest possible point score was 24, which would indicate the student ranked the responses in the category as least interesting. A low score is an area of high attraction for the student, a high score an area of potential avoidance. Since statistical tests of significance have not been made against the differences in scores, the results obtained by Scerba for student preferences for instructional style are given in highest to lowest order of their choice by students. (Table 5.2.) Also indicated is the percent of students who gave first choice to that particular modality:

TABLE 5.2

Learning Modes Preferred by Miami-Dade Students

Category	Percentage	Choice
Direct Experience	14.1 (35%)	A preference for learning situations with actual contact with materials, topics or situations.
Listening	13.8 (25%)	Preference for the auditory channel of communications or learning.
Iconics	14.8 (25%)	Preference for the visual channel of communication or learning.
Reading	17.6 (15%)	Preference for accomplishing learning through use of printed materials.

Source: Scerba, 1976.

students felt it most important to know what the teacher expected of them and logical sequencing of material, that another strong desire was for "affiliation", warm relationships either between students or between student and teacher. Opportunity to establish one's own objectives was ranked in the middle. Lowest in the hierarchy of preferred learning conditions was a need for comparison with others and preferences for working independently was next lowest.

NATIONAL FINDINGS FOR PREFERRED TEACHING TECHNIQUES

Roelf (1975) analyzing a survey made by Roelf and Warren (1973) in which they sampled 6,500 students representative of the national community college population, noted that in a class of 20 students, all under 22, 8 indicated dissatisfaction and,

> ....would prefer spending their time in more active learning-study sessions or spontaneous discussions with fellow students and the faculty. (Roelf, 1975, page 9.)

Roelf found that the majority of older students expressed satisfaction with standard group instruction. Using the same class of 20 students but over 30 years of age, 5 would be pleased with classroom instruction, 3 would feel unchallenged, however, instead of desiring more active learning roles, would want the instructor to move through materials at a faster pace or on a more sophisticated level.

Supporting Roelf's findings, Kitchin's data from his study with 200 adult subjects at the University of North Carolina, University Extension Division, indicated that more adult students chose lecture-discussion rather than other methods. (Kitchin, 1970). He also found that teacher's style seemed more important than teaching methods to student satisfaction and performance. Accepting and interactive teachers were preferred.

Warren (1974) studied student preferences for teaching techniques. For this study, student-centered approach is that which focuses on student interests and puts more control in the hands of students. Instructor-centered teaching is based on the teacher's judgement of what students should learn, the method for presentation and the pacing and evaluation of achievement.

Warren found that 56 percent expressed no strong preference, 22 percent indicated a clear cut desire for teacher-centered instruction and 22 percent wanted a more active student role.

The 22 percent who preferred the student-centered learning experience, responded "definitely yes" or "yes" to all three of the following statements:

1) I would like more class without text or assignments, organized around informal discussions,
2) I would like more small informal seminars, even if they meet less often with the instructor,
3) The faculty should stay with topics that have caught the class' interest even if they don't cover the planned amount of ground in the course. (Warren, 1974.)

Students who preferred student-centered instruction also indicated they favored noncompetitive grading procedures and informal contacts with faculty members at the expense of formal classroom contact. Students who responded "definitely not" or "no" to the same statements, wanted classes organized around explicit instructor requirements, frequent contact with the instructor, even if in large lectures, and content and organization that did not accommodate interests of particular students in the class but concerned the subject matter.

Sepe and Connoly (1973) asked classes from four community colleges which of two methods, individualized or traditional group instruction, they preferred. They found student preference almost equally divided between the two instructional models. Students were also asked to indicate the reason for their selection. The reasons given by the students in the samples for their choice of instructional model were sorted by a panel of three judges, and seven categories were developed for each model of instruction. (Table 5.5.) This indicated which features they liked most about each method.

As will be noted in Table 5.5, the characteristics of traditional instruction mentioned most often by students were "external control" (23 percent), "group emphasis" (36 percent) and "instructor as learning leader" (19 percent).

TABLE 5.5

Characteristics of Self and Traditional Models of Instruction Preferred by Community College Students

Self Instructional Option

Characteristic	Percent
Grading on achievement of objectives	6.3
Learner Controlled	5.1
Self-Pace	40.9
Individual Emphasis	28.0
Variable time input	5.1
Learner initiated testing	6.7
Instructor as a resource	7.9
Total	100.0

Traditional Option

Characteristic	Percent
Competition	7.1
External control	23.2
Group pace	4.2
Group emphasis	36.9
Set time input	6.0
Pre-scheduled testing	3.0
Instructor as learning leader	19.6
Total	100.0

Source: Adapted from Sepe and Connoly, 1973, page 8.

The responses in the other four categories were low enough to conclude that students do not value the characteristics of competition (7.1 percent), group pacing (4 percent), set-time input (6.0 percent) and pre-scheduled testing (3.0 percent). Selected comments, felt to be indicative of how students felt about the traditional model, indicated they enjoyed having the instructor act as leader because they learn by listening. They also preferred taking notes since they felt would grasp ideas better than by studying on their own. In addition, they commented, they felt more secure in a group and enjoyed group interaction.

Characteristics valued most in the individualized model were the self pacing (40 percent) and individual emphasis (28 percent). Their selected comments indicated they felt they would learn more on their own than at a class pace.

The researchers also presented the students with two models and asked them to choose which one of each of the seven characteristics of the two models they preferred. (Table 5.6.) The results indicated that students preferred all but one feature of the individualized instruction model. The feature they rejected was responsibility for control of the rate at which material should be presented. In other words, the authors felt that, though the students expressed a preference for self-pacing, their response indicated that they refused to accept the responsibility for this.

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TABLE 5.6

Responses to Forced Choice Between Self-Instructional and Traditional Characteristics

Characteristic	Percent	Percent	Characteristic
Grading on achievement of objectives	71.5	28.5	Competition
Learner controlled	43.8	56.2	External control
Self-pace	70.1	29.9	Group pace
Individual emphasis	65.6	34.4	Group emphasis
Variable time input	61.0	39.0	Set time input
Learner initiated testing	63.8	36.2	Pre-scheduled testing
Instructor as a source	62.5	37.5	Instructor as learning leader
Defined semester length	64.1	35.9	Defined semester length

Source: Adapted from Sepe and Connolly, 1973, page 11.

To conclude, in the national studies, a clear cut dichotomy between teaching styles preferred by students under 22 and over 30 emerged. Only 5 percent of the students 22 or younger (1 student out of 20) expressed complete satisfaction with their learning experience. Forty percent indicated they would prefer to spend their time in more active learning roles. However, few students over 30 appeared to desire more active learning roles.

When community college students were examined for their feelings about locus of control over the teaching process and content, it was found that the majority did not express clear cut preferences for statements which probed this issue. Twenty-two percent of the students preferred student control of the learning process and 22 percent wanted the instructor to remain in charge. A further study yielded evidence to reinforce the impression that many students (56 percent), when confronted with choice of whether they or the teacher should control the learning situation expressed preference for external control of the traditional mode and valued group interaction.

PERSONAL TRAITS OF THOSE WHO EXPRESSED PREFERENCE FOR VARIED INSTRUCTIONAL TECHNIQUES

Characteristics of students who preferred certain teaching techniques are presented in this section. Also results of matching student characteristics and/or preferences with instructional style are given.

In Warren's National study of two-year college students, 22 percent wanted clear and specific directions from their professors and 22 percent expressed a strong preference for academic self-determination. (Warren 1974.) The rest of the students did not answer "definitely not" or "no", "definitely yes", or "yes", to statements which indicated preference or rejection of either style.

Warren analyzed students' other answers and found that those who wanted student-centered instruction desired more help from the faculty and had more complaints about lack of attention than those who wanted the instructor to control all aspects of the learning situation. Warren commented that:

> Paradoxically, in virtually every other respect the student-centered students appear much more dependent on the institution than the instructor-centered students. The latter appear quite content to manage every aspect of their campus lives on their own, including academic requirements, as long as they are told exactly what is expected of them. (Warren, 1974, page 3.)

Students who appeared to want more autonomy actually desired more guidance than those who appeared to wish to be told what to do.

Warren also found the two groups differed in fields of study and age but not in grades or other measures of academic achievement (Tables 5.7 and 5.8.) Warren's observation of the ages of students preferring different instructional styles included further evidence that younger students desired more active learning roles than older students. Support for student-centered instruction was found highest from those 19 and younger and declined rapidly as age increased.

It will be noted from Table 5.7 that students desiring more active learning roles were either undecided as to their major or enrolled primarily in the fields of social science or humanities, where students who prefered the teacher-centered instruction were found in technical areas or the physical sciences.

TABLE 5.7

Major Fields of Students Preferring Different Instructional Styles

FIELDS	Instructional Styles Percentages	
	Student Centered	Instructor Centered
Undecided	13.2	7.9
Behavioral Sciences	7.3	2.3
Fine Arts	4.1	1.9
Social Sciences	5.1	3.0
Humanities	4.1	2.0
	33.8	17.1
Business	17.0	21.6
Health Services	6.1	10.8
Technology	5.4	8.9
Trade and Industry	3.2	6.2
Physical Sciences	3.2	5.3
	34.9	52.8
Education	9.7	10.0
Engineering	3.9	5.1
Public Services	4.1	3.6
Natural Resources	2.7	3.8
Other	10.9	7.6
	31.3	30.1
Totals	100.0	100.0

Source: Warren, 1974, page 3.

TABLE 5.8

Age Groups of Students Preferring Different Instructional Styles

AGE GROUPS	Instructional Styles Percentages	
	Student Centered	Instructor Centered
19 and younger	51.4	37.7
20-21	23.7	21.3
22-24	12.1	15.1
25-29	7.4	10.2
30 and older	5.4	15.8

Source: Warren, 1974, page 3.

COGNITIVE STYLES OF THOSE WHO PREFER STUDENT-CENTERED VERSUS INSTRUCTOR-CENTERED METHOD

It has been found that distinct differences occur in how people deal with their environment: that is to say, in what people attend to and how they process it.

Witkin and others (1975) place these people at opposite poles in the way they order reality. They term these processes field-independent and field-dependent cognitive styles. The field-independent person has a cognitive style which is associated with being analytical, oriented toward ideas and objects rather than people. In other words, they pay greater attention to their physical environment and feel a need to manipulate it, rather than people. They tend to show greater verbal strengths and be more realistic and definite in vocational choices. In addition, the field-independent student is apt to choose technical areas, e.g., science and engineering where they manipulate things rather than people.

On the other hand, characteristics of the field-dependent personality exhibit "...a cluster of social orientation and social skills plus less competence in articulation." (Witkin and others, 1975, page 23.) They respond to social cues and are more dependent on others for orientation and self image. In addition, they are less decided about their careers.

Warren (1974) in his study cited earlier, found that community college students who preferred student-centered teaching had a high correlation of personality and epistomological approaches with field-dependent cognitive style, and that students who preferred characteristics of instructor-centered teaching had the traits of the field-independent cognitive modes. For example, he found that community college students who preferred student-centered instruction were overwhelmedly enrolled in the humanities.

Twice as many student-centered as instructor-centered students were in behavioral and social sciences, the fine arts and the humanities, and the same ratio held for students who were undecided as to field of study (Table 5.7). However, students in the more practically oriented fields: business, health services, technology, trade, industry and the physical sciences, were twice as likely to favor instructor-centered teaching.

Warren, therefore, concluded that the student who preferred to be in control of his teaching situation frequently has field-dependent characteristics and those who stated strong preferences for teacher-centered instruction were similar to field-independent thinkers in their cognitive styles.

APPROACHES PREFERRED BY TEACHERS WITH FIELD-INDEPENDENT AND FIELD-DEPENDENT COGNITIVE STYLES AND THEIR INTERACTION WHEN MATCHED WITH STUDENTS

Just as there are students who are field-independent and field-dependent in their cognitive styles and preferences, it was found that teachers can be distinguished by the same characteristics. Evidence indicated that the field-dependent teacher favored student-centered teaching and the field-independent teacher, instructor-centered teaching. Wu (1967) reported field dependent teachers preferred discussion and discovery ways of teaching to lecturing. Ohnmacht (1967) found relatively field-independent teachers were more direct in their attempt to influence students. He also found field-dependent teachers had a more favorable attitude toward the use of democratic classroom procedures than field-independent teachers.

Riesman, Gusfield and Gamson (1970) examined faculty preference and faculty-student interaction at Oakland University and Monteith College and classified faculty members according to their preference for a "didactic" and/or "evocative" teaching style. Their description, quoted below, appears to describe the differences in approach taken by field-independent and dependent teachers:

> A didactic teacher takes for granted his greater knowledge and authority, and invites students into the materials in terms set by him. The class

> is a production in which the instructor is the producer, the director, and the writer, while the students are the actors under his direction and also the ultimate audience. At the very least, what is asked of them is that they "get the material", but the effort also may be to help them become active and go off on their own. In the classes we came to call evocative, the instructor was less concerned with covering ground or conveying ideas than with getting the students to connect what they were reading with their own experience, even at the cost of a certain fuzziness of outline. The invitation to learning was put in their own hands; they were allowed to help write the script or even rewrite it. (Riesman, Gusfield and Gamson, 1972, page 122.)

Field-dependent and field-independent teachers seem to approach the teaching situation quite differently. Through a discussion approach which their social orientation seems likely to favor, field-dependent teachers can employ informal conversational methods to engage students in learning situations and to develop rapport with them. The field-independent teacher prefers to directly influence students by the use of lecture technique and questions designed to evoke specific responses.

Few studies indicating the results of matching student-teacher cognitive styles have been made and the results have not been conclusive. However, Witkin (1975) noted that when student and teachers have been matched, interpersonal attraction and satisfaction was significantly greater than under unmatched conditions. No studies have been made of intellectual accomplishment of matched and mismatched students, using the field-independent and dependent approach, that can be applied to the college.

A study by Schroeder (1969), which investigated and used an approach different from the field-independent-dependent model, the cognitive styles of one hundred and eighteen (118) high school English students and their teachers were examined for interactive effects. It was found that students rating the teacher high in effectiveness tended to a statistically significant degree to those having cognitive styles "similar" to that of the teacher. The statistical significance was found to be even greater when success in class as represented by grades was studied. Students diagnosed as having "similar" cognitive styles also tended to be the students receiving the highest grades. In an earlier study, Wasser reported similar findings. (Wasser, 1969.)

Though few studies and fewer conclusions have been made of intellectual attainments as a result of matching and/or mismatching student and teacher personality types, there have been studies made of the emotional overtones of mismatching and matching. As was to be expected, those students who were most comfortable in a student-centered classroom expressed personal satisfaction when they were matched with a teacher whose approach was the same. Conversely, those students who were mismatched, experienced less personal satisfaction with the classroom experience. Teachers also seemed to value more highly the intellectual and personal qualities of those students whose teaching needs matched their own inclinations.

ACHIEVEMENT OF STUDENTS WHEN CORELATED WITH TEACHING STYLES

It was assumed that research on student preferences might reveal not only what methods students seemed to prefer but also the achievement of students when there was matching of teaching methods with student needs, preferences, or other characteristics.

Calvin, Hoffman and Harden (1957) found that "less intelligent students" consistently did better in classroom problem-solving situations conducted in an authoritatian manner (teacher-centered) rather than in groups conducted in a permissive manner. The same difference did not occur for "brighter students". Ward (1965) found evidence to support the concept that "abler students" benefited most from small group discussion, not teacher-centered. He found that "poorer students" gained more from lecture-demonstration. His measures of achievement were understanding and problem solving. Wispé (1951) came to the conclusion in his experiments that teaching styles (student-centered vs. instruction-centered) had no effect on the final examination scores of the "brighter (high SAT score) students", whereas the "less able students" did better in directive authoritarian classes.

Whereas Wispé concludes that teaching methods had no positive interactive effect for "brighter students", Calvin et. al (1957) indicated their "brighter students" benefited from small discussion groups. In view of these contradictions it is interesting to note that McKeachie's (1963) findings were that "bright students" benefited from the informal face-to-face discussion group.

Beach (1970) experimented with small learning groups in a social psychology course. Self reports on students with lower grade-point averages indicated that they profited considerably from small independent study groups. They reported consulting more books in preparing their papers than did the control students and an increase in their interest in social psychology. It should be pointed out that Beach was not investigating achievement in problem solving but rather increased motivation to work independently.

Trent and Cohen (1974) reported that several investigations concerning the interaction between teaching methods and students who achieved most in conventional lecture situations, showed that these students were characterized by moderate achievement needs, low social needs and low creativity. Students characterized by high creativity and/or by high social needs tended to perform best in small discussion groups. However, the few attempts to find differences in self-concept and personality adjustment variables have seldom shown meaningful results for interaction between these characteristics and achievement.

Goldberg (1969) treating the class as a moderator variable, interacting with personality characteristics such as drive patterns, achievement and satisfaction, found no significant interactive effects on achievement.

Additional studies by Haigh and Schmidt (1956) and Tallmadge and Shearer (1967) yielded evidence to show that there was no significant interaction between student characteristics and teaching methods. Haigh and Schmidt (1956) found no significant difference between knowledge of facts and principles on adolescent development when students were placed in teacher-centered and group-centered sections on the basis of stated preferences. Tallmadge and Shearer (1967) found no significant interaction between instructional methods and student characteristic variables. They stated however, that the nature of the material to be learned was critical and needed to be examined as an independent experimental variable.

Scerba (1976) in his study at Miami-Dade Community College - North Campus found interaction between the teaching style used by the instructor and students' preferred learning styles, as measured by the LSI, significant at the 0.05 level. Students whose learning style matched the professor's teaching method seemed to achieve more intellectually as measured by grades.

This interaction for matched teaching and learning styles was found for a random sampling of 700 students in introductory, General Education, English and Humanities courses, the same students required to take the introductory, interdisciplinary, social science course being prepared for this study.

Grieve and Davis (1971), when comparing the amount of geography learned by extremely field-dependent and extremely field-dependent and extremely field-independent ninth-grade children, found that the field-dependent child was more likely to benefit from discovery instruction in which verbalization of generalization came at the end of the instructional sequence. Compared with the expository method, learning by the discovery method, was theorized to take place through interaction with the teacher, a context congenial to the social orientation of the more field-dependent student.

To conclude, the first summary interpretation of the results of matching student characteristics and methods was written by McKeachie in the Handbook of Research and Teaching (1963). He indicated only one study had been undertaken with the primary aim of testing a theory about the conditions which were effective in producing learning under different teaching methods in different types of learners. The researcher found that a dearth of studies continues to be the case. Few studies, fewer replications, and few clear cut indications about the relationship of student characteristics to teaching methods were found. All findings were tentative, since there were no additional studies made to support or negate them. This had indicated a need for further study and/or for more insight into the complex relationship of variables in the classroom.

Some studies relevant to student characteristics and teaching methods, yielded evidence that apparently indicated students high in achievement needs and creativity would do better in small discussion groups, as would brighter students. Students who were not as bright, had lower achievement and social needs apparently benefited from authoritarian, teacher-centered traditional methods. However, Beach (1970) found that small group study-discussion sessions motivated students with lower grade-point averages toward independent study. Scerba's study (1976), with students required to take the curriculum being prepared for this study, found that students matched with teachers whose teaching styles corresponded with their needs, manifested tendencies toward higher grades. A study comparing the achievement of high school students and teachers matched for cognitive styles indicated positive effecte of mathing on achievement.

However, other studies in which student characteristics such as drives or motivations, sociometric needs, and other variables, yielded little evidence to support the theory that personality differences interact differently with varying teaching methods.

RESULTS RELATING TO INDIVIDUALIZED INSTRUCTION

Findings regarding the desirability of individualized instruction and its probable effects was sought in various studies. Use of a variety of forms of individualized instruction were considered by many to be one of the keys to offering adequate teaching to the extremely heterogeneous student population found at the community colleges.

Sepe and Connolly (1972) found no significant relationship between personal and academic data of "preference" groups for instructional models of traditional group instruction versus individualized instruction.

> No significant relationship (0.05 level) was found for age, sex, or quality point index. Nor were such variables as major, grade expected in the course or the students perceived academic ability found to be significantly related to preference.

Only three studies of the effects of individualized instruction upon achievement of community college students were found. Moraine Valley Community College (Illinois) used programmed learning textbooks, self-paced learning, and behavioral objectives in traditional sociology classes. Some findings were:

1) the major factor influencing a student to take the course was the expectation that he could work at his own pace;
2) individualized instruction appeared to afford the student greater opportunities to assimilate course materials and interact with the instructor;
3) the flexible scheduling did not stimulate learning because too many students tended to procrastinate;
4) students favored the individualized course to the traditional courses, although they missed having a class identity and class discussions. (Sioia, 1972.)

Hunter (1971) found that both faculty and students at Meramac Community College gave overall favorable responses to courses offered all community college students in self-directed learning units. However, judging whether students would learn more and increase their grade point averages as a result of this method is difficult to determine because the students enrolled were reported to be brighter and more academically mature than their peers at college.

In an experimental program at the Community College of San Mateo (California) reported by Warrich (1971), 49 potential drop-outs were actively involved in individualized instruction and their attrition rate was compared with 49 students who received no special treatment. Tutoring by other students was considered the heart of the program, with flexibility the key experimental feature, along with integration of individualized academic services with supportive psychological and personal counseling. The experimental program was proven effective by both measurable and subjective evaluation. The results showed that students who would undoubtedly have withdrawn, remained within the college study. However, the above example of individualized instruction could not be considered a true test insofar as normally extensive tutoring and counseling are not available. But the experiment does tend to support what has been found in other studies. Kanun (1971) detailed intervention techniques used in several California Community Colleges in an attempt to decrease attrition among potential drop-outs. These findings all point to the fact that retention was improved when extensive counseling and tutoring was used.

To summarize, personality and demographic characteristics such as sex, age and quality point averages were not found to be indicative of whether the student would prefer individualized or traditional instruction. When given an opportunity for self pacing, students were observed to use it to assimilate material better. However, among students, self pacing produced a tendency to procrastinate and the students reported missing the classroom interaction. Potential drop-outs tended to stay in the institution when a combination of individualized instruction, tutoring and counseling were used. Brighter, more academically mature students, favored individualized instruction. The overall results for the average student have not been fully explored.

SUMMARY

This chapter presents findings on how community college students viewed their educational experience, their preferences in instructional styles, characteristics of students and teachers as related to distinct preferences for instructional styles, and findings on the effects of matching students and teachers and techniques predicted to correlate with their cognitive styles. Research in the literature has provided evidence to show that:

1) A majority (54 percent) of community college students do not clearly prefer either teacher-centered or student-centered instructional styles, thus either style was acceptable. The remainder, 22 percent expressed a strong preference teacher-centered and 22 percent for student-centered teaching instructional styles.
2) Students 19 and younger are likely to be dissatisfied with their academic experience, a third are likely to feel left behind, and nearly half are bored.
3) Younger students are likely to be those who prefer active learning roles, more student-centered styles of instruction such as informal discussion related to their own interests and autonomy in all areas of learning experience.
4) Younger students who desire student-centered teaching, want greater academic freedom and self-determination. Paradoxically, research indicates that along with freedom

they express a great need for guidance in the use of their freedom.

5) Older students are much more likely to be satisfied with their academic experience and are inclined toward passive learning roles. They prefer that the instructor establish all the details of the course such as content, assignments etc. They do not mind the instructor leading the class in an authoritarian manner, but prefer an instructor who is "approachable" to one who is not.
6) Students who prefer instructor to student-centered teaching styles or visa-versa, have characteristics similar to those found for field-independent or dependent cognitive styles. These characteristics include distinct preferences for fields of study (interests), for attending to different aspects of the environment, and for ways of processing information.
7) Field-dependent students tend to favor student-centered instruction, they rely more on, and attend more to social cues and remember them longer. They have more "intuitive" ways of thinking and are not as articulate and analytical as the student who is field-independent. They tend to be uncertain in their identity and unsure about their further plans. They appear to require feedback from others for their image, and to be less certain of their future goals. The majority of these students tend to be interested in careers, the humanities and social sciences.

The student whose cognitive style is field-independent is likely to be more definite about his career plans, more certain about his identity, and more oriented toward fields of study that are involved with "things" rather than with people. A majority of these students are to be found in the physical sciences, business and technical courses. Field-independent students appear to favor teacher-centered instruction.

8) Teachers who are field-dependent in cognitive style prefer to lead classes in the manner desired by field-dependent students. These teachers prefer student-centered teaching styles, are more inclined to agree with democratic class procedures and facilitative or "evocative" teaching styles.

9) Teachers who are field-independent in their cognitive style prefer to lead the classroom discussion and exert greater control and leadership over all aspects of the class. In other words, they are instructor-centered in their approach.

10) Teachers and students matched for field-independent and dependent cognitive styles find each other's personalities and intellects more attractive; however, effects on achievement are not clear.

11) Students who score lower on measure of academic aptitude appear to understand and solve problems better through teacher-centered approaches to instruction such as lecture-demonstration and close supervision rather than through informal discussion. However, informal study groups may benefit less academically qualified students in stimulating

their interest in the subject matter.

12) Studies in which student characteristics such as the need for creativity, achievement and other motives when matched with teaching conditions have shown some effect. However, the theory that such personality characteristics interact differently with teaching styles, may have greater validity when the nature of the material to be learned is also taken into consideration.

13) Community college students indicate they are in favor of all aspects of individualized instruction except assuming responsibility for rate of learning. Asked to rate the features of instruction they choose external control of the learning process, group interaction, and the instructor as learning leader. They feel they learn better by listening and taking notes than by studying on their own.

14) Individualized instruction appears to be successful when there is a great deal of support from peers in addition to psychological and personal counseling. With experiential students who are bright and self-disciplined enough not to procrastinate it is also successful.

15) The following were findings for students of Miami-Dade Community College - North Campus.

    a. Students at Miami-Dade Community College desire greater relevance in instruction in relation to their career choices and fields of study, increased student-teacher interaction, and improved guidance toward educational and vocational goals.

b. Students at Miami-Dade Community College favor experiential learning, or learning through first-hand contact with material. They generally reject reading as a learning style. Listening and visual representation of ideas were more highly valued than reading.

c. Using Canfield and Lafferty's LSI to match student learning styles with teaching styles showed interactive effects on grades of students for whom this course is being designed.

d. Learning conditions favored by students at Miami-Dade Community College were as follows: Well planned, logically organized courses in which the instructor "covers" the material; a friendly class atmosphere with informal student-teacher relations and interchange among the students. They do not express as much preference for working independently, or for situations in which competition is stressed.

CHAPTER VI

SUMMARY, FINDINGS AND APPLICATION

SUMMARY

A goal of the present study was to prepare a curriculum based on an experiential approach to learning that would be effective with a diverse student-body representative of the enrollment of a large, urban community college such as Miami-Dade and other Community Colleges that practice the "open door" admissions policy. The specific course for which the curriculum was prepared was General Education, Social Science 101, an interdisciplinary social science course drawing mainly on the disciplines of Anthropology, Sociology and Psychology.

It was believed that the traditional lecture approach to teaching and the emphasis on theoretical learning used in this course, and many others, were not meeting the needs or learning styles of large numbers of students admitted to community colleges under the "open door" policy. The purpose, then, of this study was to prepare a course suited to the needs, learning styles and skills of students that could be incorporated into the general education curriculum of the community college.

The following major issues were investigated:

1) What educational outcomes were considered important by experiential philosophers, practitioners and researchers?

2) How did experientially oriented philosophers, practitioners and researchers theorize learning occurred?
3) What techniques and activities were recommended for carrying out an experiential approach to learning?
4) What learning skills and styles were optimal for students in experiential and traditional learning?
5) What student characteristics would be the community college teacher of a required general education course probably encounter?
6) What were the preferred learning styles of community college students and what results were obtained from matching student characteristics with instructional styles?

The survey method was used to examine the issues raised in this study. The works of widely respected philosophers, theorists and practitioners of experiential education were read and important theoretical and practical findings presented. Data on student characteristics, preferred instructional methods and results of attempts at matching methods to student preferences or other characteristics was obtained from a variety of sources. These sources included reports of research and results of surveys conducted at Miami-Dade North Campus and other community colleges.

A comprehensive search was made of literature by the author and similar searches were requested from University Microfilms, ERIC - Clearinghouse for Junior Colleges, Educational Testing Service and Florida Educational Resources Information Center (FERIC). The findings incorporated in this study were then used in the design of a theoretically effective curriculum for Social Science 101 representing an experiential approach to learning in the community college.

FINDINGS

The question raised and the findings as they pertain to the design of a curriculum for Social Science 101, were as follows:

1) What educational outcomes were considered important by experiential philosophers, practitioners and researchers?

The overall findings indicated that the most valued goal of this curriculum would be increasing the student's ability to learn from experience. These abilities were to participate in an experience, to observe all aspects of that experience, including one's role, to reflect on them, to draw generalizations, and, finally, to apply and evaluate these in new situations. It can be seen that a premium would be placed on enveloping student's ability to intellectualize as well as to actively seek and apply his knowledge. Such a curriculum could stress methods designed to encourage independent thinking and the ability to adjust to a changing world.

It was found that an emphasis on learning through experiential methods would fulfill another important goal of experiential philosophy which was that knowledge should be tied to action, not to verbal structures given by the instructor. Such knowledge was highly valued because it would be gained through and tried to the student's own motives, skills, needs

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and goals, not those of the teacher. Therefore, it was hypothesized that the student who learned through action would be able to transfer the principles to new situations and retain them for a longer period of time than learning acquired in a traditional setting.

Through methods used in experiential education it was believed that students would be motivated to set their own goals and to seek new situations in which to test their knowledge.

2) How did experientially oriented philosophers, practitioners and researchers theorize learning occurred?

Experiential educators pointed out how the activities as well as processes involved in learning from experiences differred from those used in learning from symbols.

In the traditional information-transmission learning model, symbolic knowledge is transmitted from instructor to student. The student would act as a passive receptor of this symbolic transmission, then would use cognitive processes to "understand" these concepts. Inasmuch as many teachers in this situation do now draw on the student's own experience, it implied that the student had sufficient background to understand the symbols. However, the process often stops at memorization of symbols and the student is unable to either generalize the underlying principles or to apply them. Whereas in experiential learning the student experiences consequences to himself as a result of his action and can therefore more easily transfer knowledge to new situations.

The researchers agreed that there are primarily four steps involved in the true experiential learning process. The student starts with action in a concrete situation. In the next step, reflection and observation (see Figure 4.1) the teacher should act as a guide and through discussion and debriefing expedite the process of reflection and observation. The student should be able to understand the underlying processes and make generalizations thereby. The third step (application), implies that the student be able to seek out, or is given new experiences. He should then be able to apply the principles learned. With each new application the entire learning process should begin anew, resulting in further refinement or redefinition of knowledge. The implication for the experiential teacher is that he enables the student to approach experience in a pragmatic fashion, regarding learning as a process that is cyclical. Whereas the end product for many traditional teachers is simply a verbal retention of symbols which the student can then recall in a test situation.

3) What techniques and activities were recommended for carrying out an experiential approach to learning?

Research indicated the teacher should act as a skilled provider and facilitator of experiences, debriefing exercises and reapplication of principles.

The types of structured experiences the teacher should provide would be social simulations, gaming, role playing, etc. The teacher should choose that form of action which provided the rules of interaction, types of participation and content which were relevant. The exercises used and the discussion should depend on the type of principles the instructor wished to enable the student to apprehend.

The results of research examined in this study indicated that the teacher using experiential approaches would have to master techniques that facilitated the student's analysis of outcomes, feelings, cause and effect relationships, alternative actions and possible effects. It would be necessary for him to motivate the student to enter into the activity, encourage formation of generalizations and facilitate the obtaining of further data for concept formation-through either traditional or experiential means. The instructor, it was found, should serve as a facilitator taking care to encourage the student to draw his own conclusions and proofs. He must be aware of the danger of imposing his own views, thus inhibiting the true learning process of others. He would not be a dispenser of information as such as a skilled leader, knowledgeable in the processes of learning from experience and techniques to facilitate these processes.

At one stage of the learning experience (discussion and debriefing) the sharing process in which interaction with other students through pooling of ideas, observations, conclusions, is important. Handling this social technique in the experiential method requires skill on the part of the instructor. Thus, in addition to providing experiences, the teacher must be adept in acting as a mediator so that the goals of the experiential process are not lost. He must use caution in guiding the debriefing and discussion sessions so they do not degenerate into aimless talk or argument. When conclusions are arrived at, the teacher should make the class aware of them, again, without imposing his personal preferences.

It was perceived by researchers in experiential education that the traditional methodology should not be discarded. However, learning by experience should precede traditional classroom technique. Thus attitudes gained in experiential teaching, e.g., self-motivation, application, will infuse the student's use of traditional methods. By combining methods, the student would experience greater success in the traditional classroom as well as in life situations.

4) What learning skills and styles were optimal for students in experiential and traditional learning?

Kolb's Learning Style Inventory indicated four major skills were needed for experiential learning. All of these skills are necessary for optimal learning from experience, however, no student would display equal ability. Kolb provided a means in his LSI (Appendix) that would enable community college students to analyze their strengths and weaknesses.

The skills needed would be to actively involve oneself in experience (CE), make reflective observations (RO), formation of generalizations or abstract concepts (AC), and application (AE), e.g., the ability to seek situations and actively apply concepts. However, no individual would be equally competent in all areas. It would be the task of the teacher working in conjunction with the student, using Kolb's inventory to analyze his weaknesses and work with him to strengthen these areas.

Inasmuch as it was found the community college teacher would also need to use traditional learning, the teacher would want to know the styles through which his students best assimilated symbolic information. For this he could use the LSI. Students with strength in verbalization and ability to intellectualize their experiences are apt to do well in traditional learning methods.

5) What student characteristics would the community college teacher of a required general education course probably encounter?

The community college student usually comes from a lower socioeconomic background, is usually the first in his family to go to college, and he has less expectations for success in the academic setting. "New students" also present reading problems as well as having a low self-image. Remedial students were found to require special types of diagnostic testing and psychological counseling if they were to succeed. Also women students, young students, and those just out of high school, were found likely to be in need of career guidance and realistic assessment of strengths and weaknesses. Many Cuban students might present problems of cultural conflict. Older students were found to see the college as a means of training toward better job placement and to prefer traditional methods of teaching. Two thirds of the students entering Miami-Dade Community College - North Campus do not initially intend to pursue their education, that is transfer to a senior institution. They are not verbally oriented and regard education as a means to material success, as training, and value the application of ideas rather than abstract concepts. Black students tend to seek the community college and are apt to present special problems in their lack of linguistic skills and low self image.

To conclude the community college student frequently comes to the academic setting not as well prepared emotionally or intellectually for academic success as those students entering traditional four-year institutions. However, practical, concrete ways of learning from experience would indeed be well suited to the needs of most community college students.

6) What were the preferred learning styles of community college students and what results were obtained from matching student characteristics with instructional styles?

It was found that the community college student would feel secure if the rate of presentation of material were under the control of the teacher. He would also prefer traditional group instruction to individualized instruction; though he admires the features of individualized instruction he would not wish to accept responsibility for pacing his own learning and would enjoy the group emphasis of traditional instruction more than the individual emphasis of individualized instruction.

While any course offered in the community college would be attended by students with a wide variety of learning styles, it was found that the majority preferred learning through first hand contact with material and the least preferred style of learning was through reading. Inasmuch as the experiential teacher would retain some of the traditional approaches, he should bear in mind that the visual and lecture method in the traditional approach is a valuable alternative to reading.

National findings also revealed preference for greater control over materials and presentation would be strongest with younger community college students. Students over thirty would be more inclined to go along with traditional methods of instruction. National findings indicated more than half the students at community colleges would not express a strong preference for methods of instruction but that 22 percent would desire strong teacher control over all aspects of the course, while another 22 percent, mainly younger students, would prefer to be in charge of all aspects of the course themselves.

Results from both Miami-Dade and national studies indicated students would prefer teachers who were "approachable", they desire an informal relationship with instructors. Results of Canfield and Lafferty's LSI indicated that students at Miami-Dade would not desire competition and comparison among other students, nor the independent setting of goals as much as they would prefer a course that was well organized, with details known in advance, and in which the instructor "covered" all the material.

Results of matching students with teaching techniques indicated that more directive, teacher-centered approaches to problem solving and understanding would work best for students with lower academic aptitudes. However, informal study groups would motivate those less academically qualified students toward greater interest in the subject matter and to read more. Brighter students would benefit equally from small informal study groups and from the larger lecture-discussion format, so, for them, the specific type of instruction was not significant as to achievement.

Individualized instruction would appear to work well with brighter students or potential drop-outs given a counselling as well as individualized attention. Both teacher and students express emotional satisfaction if there was matching between teaching methods and learning styles. At Miami-Dade significant interactive effects for grades were found when students and teaching styles were matched using Lafferty and Canfield's LSI.

APPLICATION OF CURRICULUM DESIGN

National and Miami-Dade research on characteristics and learning styles of students indicated community college students tend to have lower achievement expectations and placed reading among the least preferred study methods. Therefore, it was believed that a curriculum designed to combine experiential learning with traditional methods would be most helpful to the typical community college student.

The researcher prepared this curriculum using materials which would facilitate this type of presentation and which would conform to the goals of Social Science 101, an interdisciplinary, required general education course drawing mainly on the disciplines of sociology, psychology and anthropology. (Appendix B.) Goals of SSS 101 aim at enabling the student to understand the complex dynamics underlying our social class systems, mastery of some psychological and sociological theories and their application, and understanding of the nature of scientific methodology. However, perhaps the primary goal is that the student achieve self awareness, in other words, that he realize his own needs and potential in relation to society.

It was found that in the use of traditional methods (information transmission) the average community college student expressed boredom and dissatisfaction. National and Miami-Dade research on characteristics and learning styles of students found they placed reading among the least preferred learning methods and experiential methods among the most preferred. They prefer applied over theoretical learning. Of even more significance, it was also found at Miami-Dade's North Campus that there was a positive effect on achievement when learning styles of students were matched with teaching methods, using Canfield and Lafferty's LSI. As educators we cannot hold the subject matter sacred while ignoring the needs of the student.

With this in mind the researcher blended experiential and traditional methods in ways research indicated would achieve the content and processes indicated by course goals as given in the Catalogue of Miami-Dade Community College course description, department guidelines, and the rationale for a general studies course.

The following description of a unit illustrates the way in which the curriculum was designed to incorporate traditional and experiential teaching methods and activities in ways that were theoretically suited to the needs of the community college student. The following example will also trace the learning process in which the activities of a typical unit moves from concrete experience through various stages of debriefing and acquiring additional knowledge, to reapplication and testing in a concrete situation.

It will be remembered that all experiential educators agreed that knowledge starts with immediate involvement in concrete experience (CE)(see Figure 4.1) before proceeding to the traditional method. Thus, in order to enable the student to learn about social class in America, the caste system in America, the manner in which individuals are affected by their socioeconomic position etc., students are asked to play a simulation game such as Indian Reservation or any other social simulation game in which the dynamics of social class and individual mobility are experienced by the student. Social simulation games are used whenever possible throughout the curriculum because they include gaming and role playing in a simplified model of reality and involve him in immediate activity. This particular game allows students to experience life as it is today for the Indian on the North Plains. It is an all purpose game. If effectively used, it allows students to experience vicariously membership in a minority social class and ethnic group subject to poverty, discrimination and relegated to outcast status.

After participation (CE), the student is helped to learn from his experiences. The teacher would go through the process of class discussion in which students would be aided in verbalizing what they were trying to do in the game and the experiences they had (RO). A variety of reactions by his own peer group should make clear to the student that there is more than one way of seeing and responding to reality. This in itself is a valuable experience in realizing the goals of Social Science 101.

The teacher would then help the student think about the outcome of his discovery, analyze cause and effect relationships, explore results of alternative actions, etc. (AC). They are then encouraged by the teacher to draw conclusions and to analyze the manner in which they would be "true", and would help him cope with his environment (AC). "Truth" can be seen as a social construct, rather than a rigid entity. Hopeful the student is enabled to realize that certain "truths" are simply means by which men adjust to society. Traditional methods should then be used to enable the student to refine and broaden his knowledge of concepts as well as awareness of the complexity and meaning of social class. In our curriculum the film Social Class in America would be shown, and the students asked to fill in a retrieval chart in which they list facts about each social class. The next process would be debriefing and/or discussion in which, again, findings are listed, similarities and differences noted, and students are guided toward conclusions.

The final stage in experiential education is the ability to reapply and perhaps modify principles learned (AE). It is considered necessary that the student participate in as many experiential learning situations as possible in order to apply, test and redefine their theoretical knowledge. In this case the teacher enables the student to reapply the principles by giving the student a chance to play Life Game (a game in which each player is given currency and diplomas, enters the "market place of society" where he is "free" to move up the ladder of success.) At this stage the student should be able to apply the principles learned and perhaps modify concepts derived from Indian Reservation and Social Class in America.

It is evident that this unit would probably overlap others and perhaps take three weeks to accomplish. However, the principles learned would be applied throughout the course and were designed to facilitate understanding of a variety of extremely complex social processes. In addition this learning experience would have transfer value, enabling the student to recognize and empathize with analogous situations in literature and life.

It will be noted that goals and objectives were stated in behavioral terms. In other words, types of behavior students would be expected to learn would be tested at the end of the semester. They would be asked to demonstrate learning through either experiential testing, by reapplying principles in analogous game situations, or through traditional testing.

It should be noted that many of the goals of experiential education are difficult to measure because they are affective or deal with complex behaviors for which objective measures have not been developed.

After stating the tasks of the course in behavioral terms, these tasks were then systematically evaluated so that the most efficient means of teaching strategies would be decided on. In accordance with the theory of experiential and traditional learning, the researcher found that the most efficient means of enabling the student to learn certain concepts was through use of study guide questions. Therefore, the learning-teaching strategies provide for independent reading and answering study guide questions which are then gone over in the classroom.

In developing this curriculum the researcher found a number of guides to experiential activities which aided in implementing the desired goals. It will be remembered, students display a variety of skills and weaknesses in their various learning abilities and styles. It is important that the teacher and student be aware of these. In order to assist the student in the areas in which he is weak, both Canfield and Lafferty's and Kolb's Learning Style Inventories were found effective in working with students in implementing the experiential learning process. Canfield and Lafferty's Inventory seems to offer particular promise of giving an insight into preferred learning styles of the community college student.

In choosing which types of learning activities to use in experiential education, both Edgar Dale's "Cone of Experience" (Figure 6.1) and Kolb's model for "Learning Experience Design" were found to offer the greatest practical help.

Dale has arranged types of learning activities into a learning hierarchy ranging from active involvement (Direct, Purposeful Experiences) on the one hand to symbolic involvement on the other hand (Verbal Symbols). It will be remembered that it was found only 15 percent of the students at Miami-Dade choose reading as a preferred learning style. Therefore, the researcher in choosing his materials found that using this cone not only allowed his greater control over implementing the emphasis on active involvement of experiential learning but also in taking cognizance of his students' needs. Kolb's learning model ties in with every phase of experiential learning, and was a guide to the activities which were appropriate to each stage.

Other material which the researcher used, and which the reader might find helpful, were Ron Stadsklev's Handbook of Simulation and Gaming in Social Education (1974). Both Stadsklev's Handbook and Baldridge's Action: An Experiential Approach to Sociology (1975) provided many of the experiences that were found appropriate for this course.

Gene and Barbara Stanford's book Learning Discussion Skills Through Games (1969) was used as a source of exercises (games) to help the student acquire the skills needed to create a climate that encouraged all persons to share their ideas openly, to re-examine their own feelings and ideas, and to listen carefully to others. These skills are essential to success in experiential education.

Research indicated all community college students expressed a desire for relevance and the magazine Human Behavior deals with current research in areas of interest to the student. This researcher found that it stimulated the student's interest in all areas of social science and is a very inexpensive source of material.

The researcher requested the student to read an article relating to the area being studied. He is then asked to write a summary incorporating his own reactions to the article. This enables the student to acquire the traditional skills of analysis, abstraction and communication of ideas. The researcher makes it clear that they are not the author's own words and emphasis is placed on his interpretation of the article.

Thus a brief review of the Appendix will reveal that it has been designed to maximize use of research and

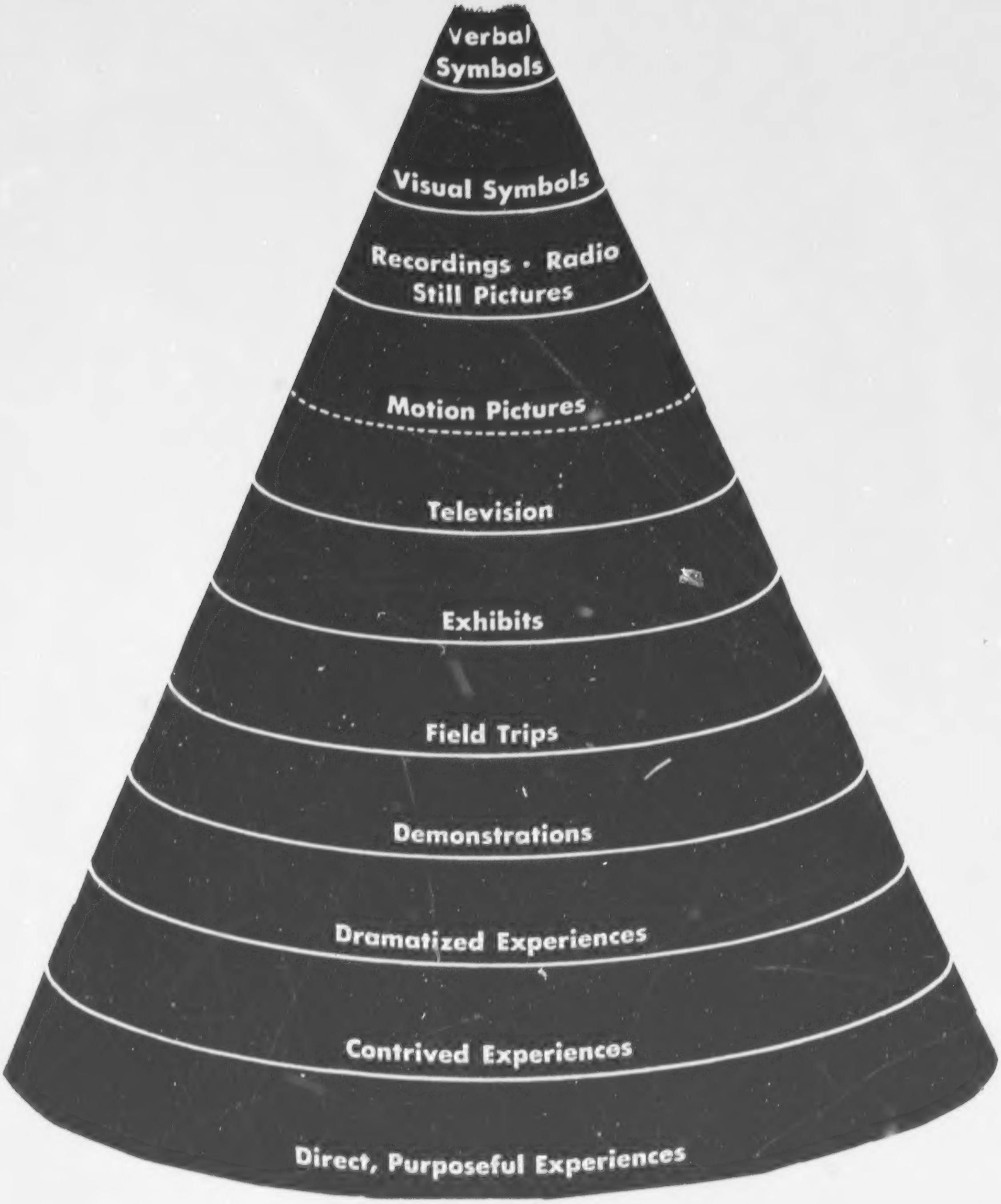
Verbal Symbols
Visual Symbols
Recordings · Radio Still Pictures
Motion Pictures
Television
Exhibits
Field Trips
Demonstrations
Dramatized Experiences
Contrived Experiences
Direct, Purposeful Experiences

Figure 6.1 - Cone of Experience

Source: Dale, 1954, page 25.

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material so that a combination of experiential and traditionally oriented methods related to student needs will yield optimum results.

APPLICATION

It is believed the effective application of this curriculum would provide an idealized model of instruction which would accomplish significant objectives. It would meet goals that would enable the student to transfer learning from the classroom to "reality" by using teaching techniques which actually correlate with the needs and abilities of the student.

The success of implementing this curriculum would depend greatly on the skill of the teacher since he would be called upon to provide a greater variety of experiences than in a traditional setting. He must assist in transforming the student from a passive observer, unwilling to take responsibility, into an active participant in the learning process.

The instructor who wishes to implement techniques which require greater student participation may wish to consult "Staging a Behavioral Science Learning Experience: Transforming Observers into Participants", by Culbert and Schmidt, and Human Interaction in Education by Stanford and Roark. Both give insight into how the learner is likely to approach experiential techniques, and practical help in obtaining meaningful participation by the learner.

The author will implement the entire curriculum in the Fall of 1976, with one of his classes. The class will meet in a regular classroom. Student assistants who have taken the course will also be used. The student assistants can be used as effective critics as well as an additional resource for students to relate to.

EVALUATION

The curriculum suggested by the present study should be evaluated before it is used on a broad scale. The following is a plan to obtain objective assessments of the model at Miami-Dade Community College.

Subjects - The subjects will be students who sign up for the one of three morning classes of the instructor. Each class will meet in the same room, one of the classes will be randomly selected to be the experimental group. The non-randomized control-group pretest-posttest design will be used. The preassembled groups will be as similar as availability permits and given pretests. Pretest means and standard deviations will then be compared for similarity.

All three classes will receive the following pretests:

1) The pretest will include at least two items for every objective. The items will be checked to see that they measure the action called for by the verb in the objective, and to see that the item employs the statement of given conditions set forth in the objective.
2) Personal Orientation Inventory (Shostrom, 1966).
3) Canfield and Lafferty's Learning Style Inventory.
4) An instructor prepared measure of attitude toward the

four processes of experiential education, their acceptance of active involvement, reflective observation, abstract conceptualization, and active experimentation will be measured. The instrument will also be prepared to measure students' attitude toward each topic of instruction. The responses will be written to reflect a highly favorable attitude toward experiential approaches to learning, through favorable, neutral, unfavorable, and highly unfavorable. Students will use their identification numbers, and a class member will collect and hold post-test answer sheets until the final grades were posted. Attempts will be made to contact students who withdraw from the course and to find out the reasons for their withdrawl. These responses will indicate their attitudes toward experiential education.

Procedures - The experimental group will receive the entire curriculum as described in this study while the other groups will receive regular instruction based on more traditional approaches to teaching and learning and subject matter.

Following the courses, all subjects will be given all the measures described above except for the LSI.

Analysis and Predicted Results - Analysis of covariance will be applied to measure the relationship between the grade of the student and his preference for learning style as measured on the LSI. It is hypothesized that significant interactions (at the 0.05 level) between grade, preferred learning style of the student and instructional style the student is exposed to (either the experiential or the traditional) will be found.

Mean post-test scores for both groups will be found for both the attitude survey and the achievement test. The difference between the pre and post-test means should not be different for each group for the achievement test. It is assumed that the application of experiential methods will be associated with a significant change favoring the experimental group over the control group in regard to attitudes toward the processes of social science and experiential education.

It is hoped that the experiential course will be a factor producing a significant gain for the experiential group when compared with the randomly matched control groups in the following scores of the Personal Orientation Inventory: Support Ratio (O/I); Self Actualizing Value (SAV); Existentiality (Ex.); Self-Acceptance (SA); Nature of Man (Nc); Synergy (Sy); and the Capacity for Intimate Contact (C).

Attitional Evaluation Strategy - These additional evaluation strategies could be used. An experimental situation can be used to assess the unique skills which experiential educators aim to impart to their students. It will be seen whether significant differences can be noted between the participation of students in the experiential group and the regular groups in a game such as Star Power and the consequent debriefing process. Participation will be audiotaped and various behaviors noted, such as number of observations made by the students of their participation, number of cause and effect relationships noted, number of generalizations offered, number of proofs and applications suggested. Significant differences for these and other behaviors between experimental and control groups could be determined. Other observations, such as abilities to listen to each other, number of students who participate, number of self-disclosures, could be made.

Finally a class evaluation form could be given in which the students evaluate the curriculum. Both open ended and close ended questions could be included. It would have to be determined whether the students favored the experiential class or the traditional class.

Unobstrusive measures of class interactions should be used to assess experiential education. Objective rating scales might be developed to assess peer interactions, frequency of boredom, degree of participation and other similar behaviors. These scales could also be used to establich the degree to which conditions under which students interact in the processes of observation, reflection and generalization are being implemented.

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APPENDIXES

DOCUMENT RESUME

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ABSTRACT

The West Valley Community College District has developed a comprehensive plan for providing special programs and services for its students with communication, learning, and physical disabilities. This document discusses the needs assessments and other preliminary work that went into developing the plan and describes the objectives, functions, costs, and methods of evaluating each of the special programs and services offered in 1977-78. It also discusses the methods of coordinating resources and describes an in-service training program designed to provide continuous technical training for the special education staff and to alter attitudes within the general college community. The programs and services offered in 1977-78 include: programs in speech/hearing/language skills and reading/writing skills, adaptive physical education, enabler services, learning efficiency assistance, counseling and financial aid, health services, tutorial services, and a re-entry program for women. (DC)

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West Valley College Comprehensive Plan for Special Education

1977 - 1978

submitted by:

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JC 770 511

At this time, March 1977, West Valley Community College District is in a transition phase, a transition from a one-campus to a two campus district. In September 1978, Mission College, presently operating at Jefferson School and known as Mission Interim, will be in new facilities in Santa Clara. We anticipate that Mission College will formulate their own plan for Special Education in 1977-78 for the 1978-79 school year. Although the plan described here is a West Valley College plan, the needs of Special Education students of the entire district will be served by this plan in the school calendar year 1977-78.

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Philosophy

West Valley Joint Community College District is an institution of higher learning which is responsive to the educational needs of its community. As such, its primary obligations are to teach, preserve, and expand the knowledge which is essential to the society it serves. The College District encourages, supports, catalyzes, and participates in the free flow of ideas in order to enrich life of the individual and the community.

The District also recognizes that one of its prime purposes is to offer opportunities for individuals to continue throughout their lives the process of actualizing their human potentials and enhancing their sense of self-esteem while learning life skills.

The District is cognizant of the community's request that needs of individuals and diverse groups should be met. Special concern is therefore directed toward assuring equal access for students with special needs to all educational opportunities within the college.

The Special Education programs of West Valley College are dedicated to providing the education which is essential in order for the special student to participate in the community whenever possible. They respect the individual's right to expand his or her knowledge, to explore ideas, and to take risks. Furthermore, these programs accept the responsibility for facilitating and/or providing diagnostic services, instructional services, and guidance and supportive systems as needed. The provision of instruction and services which maintain constant attention to individuality, self-esteem and self-reliance is an objective of primary importance. The instruction and supportive systems are designed to provide the individual with exceptional needs with special help in the setting which will promote maximum interaction within the college. Finally, these programs seek the creation of a more just society where both the community and the college accept and expand their awareness of the needs of the special student.

Recognizing that the needs and desires of the community and its citizens are not static but that they change within the context of a changing society, the Special Education programs strive to respond to such change in order to remain vital and best serve the students of West Valley College and the community. Therefore, the achievement of the goals and objectives mandates a dynamic and cooperative relationship between the individual, the programs, the college, and the community.

Needs Assessment - College and District

Asilomar Conference - Institutional Goals - 1973

Students, faculty, members of the classified staff, administrators, and Trustees of the West Valley Community College District conferred in October, 1973, to establish goals for West Valley College. Achieving the top twenty goals, out of some 227, has since been an established priority for institutional development at West Valley College. Five of the top twenty goals direct the college to provide and co-ordinate additional curricula, diagnostic services, support services, and facilities for physically, mentally, and educationally handicapped students.

West Valley College Accreditation Application - 1974

In October, 1974, West Valley College made an application for accreditation in the form of a self-study report. Nine areas of the college were identified for review, appraisal, and recommendations. As a result of this comprehensive study of the college by the members of the institution, needs were defined and direction provided for meeting those needs.

The forecast section, enumerating future goals for the college, "Functions and Objectives" of the Sub-Committee's report stated: "Developmental Education should be understood to include special services not only to those with learning handicaps, but also those with physical handicaps and any who are otherwise disadvantaged in their pursuit of learning. If not a department within itself, Developmental Education should be identified as a campus-wide, discipline-crossing program. Developmental Education programs should be expanded."

The appraisal section of the Curriculum Sub-Committee's report noted: "The College, the committee feels, is not yet set up to handle those not particularly below the "remedial" level, but outside it, for example, those with visual or auditory handicaps. There appears to be little or no monitoring to determine if a student needs special help."

In addition, the Curriculum Sub-Committee, forecast section, stated that: "There should be a commitment by the College not only to allow students with differing backgrounds and abilities to enter West Valley College, but also to provide the best possible learning experiences to match student potentialities, while recognizing the limits of financial resources. Responsive "open entry" planning might be facilitated by: short courses; use of machines, tutorial devices; individual studies; specialized help for students with auditory and visual problems; reduced class sizes; broad transfer value for all educational experiences; and further study of testing procedures to help determine appropriate curricula for certain students. Provision should be made to provide for those who need orientation and special help in order to profit from the college experience. A need is apparent for broad programs of instruction in general concepts and learning skills, particularly for those students who have not made specific career choices. Finally some students need help socially and financially; this might best be provided in programs such as WREP (now called REP)."

The recommendations of both the Functions and Objectives and the Curriculum Sub-Committees have been implemented in the establishment of the Speech/Language/Hearing Program, the LEAP program, and the Enabler Office, and in the co-ordination of Learning Services.

Finally, the Student Personnel Sub-Committee's report, Appraisal section, noted: "An Ad Hoc Committee on programs for the handicapped has been set up by the Office of Education to study special services and curricula as well as more efficient means of recruiting and helping those who are handicapped." It was this Ad Hoc Committee for Handicapped Students study which resulted in the development of the Enabler Program presently co-ordinated by Sylvia Selleck.

Enabler Program- Needs Assessment

West Valley College serves a population of approximately 465,000 persons. At the close of the spring semester, the college had an enrollment of 20,851. At the present time the district is building a second campus so as to reach and serve an even larger portion of the general population.

The State Department of Education has estimated that approximately 7% of a given Community College's population is handicapped in one way or another. In addition, they have further estimated that 25% of the 7% identified will require Supportive Services in order to successfully integrate into the college environment. These figures indicate that West Valley has approximately 364 students who, by the nature of their disability, require special instruction and/or services.

Spring 1976 Enrollment Figures

Full time day students	5,555
Full time evening students	267
Part time day students	7,373
Part time evening students	7,656
total	20,851
Disabled students (7%)	1,459
% disabled students requiring special services/ instruction	364

Needs Assessment - Learning Disabilities

In Spring 1975, the Governing Board of West Valley College created a position for a Learning Specialist to develop and direct a program for adults with learning disabilities. As a result of this appointment, various follow-up needs assessments determined the prospective population, the extent of community interest, the present student interest, and the faculty's need to refer students with exceptional learning problems to a program designed to meet their needs.

The Learning Efficiency Assistance Program, established by the Governing Board of West Valley College in June 1976, resulted additionally from inquiries and statements by faculty members that there existed some students, primarily in basic skills classes, that did not seem to succeed even with the most conscientious teaching.

The following organizations and personnel were contacted by letter, phone, questionnaire, and personal conference. In addition, basic skills classes were surveyed to determine skill levels.

1) Two parents, members of the local chapter of the California Association for Neurologically Handicapped (CANHC), on the LEAP Advisory Board stated that a program was needed at West Valley College to serve Educationally Handicapped Adult students. These parents themselves had adult children in need of supportive help at the college and knew of other parents in the district.

2) Throughout the first year of planning, 1975-1976, 20 students inquired into the possibility of receiving assistance through a learning disabilities program. Although an active program did not exist, students continued to find their way to the Learning Specialist. Many of these students were referred by librarians, counselors, and English instructors.

3) The Counseling Staff at West Valley College has indicated a need for a program for students with learning disabilities.

4) In 1973, Virginia Law, Reading Department Chairperson, made an in-depth survey of 66 students in English 50/61 classes. "10 ESL students were identified including Chinese, Korean, Portugese, and Spanish-speaking. Using the Lindamood Auditory Test, 9 students were identified as having auditory perception problems of varying degrees and these were referred to the Speech Therapist. At least 4 students had severe visual problems which we were not prepared to handle. Next year we will have the service of a Counselor-Enabler, a Learning Specialist, and a Reading Specialist, and we will be able, as a college, to assist them. We have no reason to believe that these sections were different from other English 50 sections in their student population, and so we must conclude that a fair number of English 50 students have special needs."

5) A survey of 181 students in English 50 - English Fundamentals at West Valley College - in Fall '74-'75 indicated the following:

Nelson-Denney - Form A	Vocabulary Grade Level
42 out of 181 students	10.0 and below
20 out of 181 students	9.0 and below

Nelson-Denney - Form A	Comprehension Grade Levels
63 out of 181 students	10.2 and below
32 out of 181 students	8.9 and below

Another earlier survey using the Nelson-Denney Reading Test, Fall 1973, of 257 students in English 50 and 58A indicated that 100 students were from 7.0-11.3 grade level in vocabulary and 99 students were between 7.0 and 10.2 in comprehension.

Many of these students, functioning two or more grade levels below Freshman level may have learning problems which require special attention from a Learning Specialist or Language Specialist.

6) In Spring 1976, letters were written to all Directors of Special Services in the feeder high schools of the district inquiring as to the number of students enrolled in Learning Disabilities classes. The responses from the letters indicated an approximate total of 437 students identified as having specific learning disabilities and presently enrolled in Learning Disabilities classes. The various feeder high schools indicated their concern that continued educational services be available to all students at the community college.

7) In addition to information received from the local feeder high schools, inquiries were made at the county level to obtain information about the total number of students at all levels identified as having a diagnosed learning disability. In 1975-'76, Santa Clara County identified a total of 3,367 students in the combined elementary/high school population identified as having a diagnosed learning disability.

Needs Assessment
Speech/Language and Hearing Program

The Speech/Language and Hearing Program was instituted at West Valley College in Fall, 1974. The following needs assessment was part of the program proposal submitted to the Governing Board by Winston Miller, Chairperson of the Speech Department, and Betty Price, then Speech Therapy Consultant:

> Research of the literature pertaining to needs assessment and/or incidence of speech/language or hearing disorders of community college or university students reveals little information. This lack of information reflects the need for further investigation in this area.
>
> A pertinent study of incidence was, however, reported in the proceedings of the conference, "On Developing a Comprehensive Speech, Hearing, Language Program for Junior College Students with Communicative Disorders," held on October 25, 1969, at California State College, Los Angeles. The conference was co-sponsored by California Speech and Hearing Association, California State College, Los Angeles.
>
> The study was an attempt to determine the incidence of speech disorders in two community college populations. Included in the study were 590 students. Approximately 20% of the test population were Afro-American, Mexican-American, and other foreign born students. The subjects were tested to determine if their speech called attention to itself or interfered with communication. It was found that 21% of the total test population was identified as having speech disorders or deviations. Minority groups represented 10.5% of this total figure. The high percentage of speech disorders among the Afro-Americans, Mexican-American and other foreign born students revealed a need for speech services teaching oral English as a second language. The high incidence of speech disorders among the white population reflects a need for a clinical speech/language and hearing program.
>
> A comparison of the studies incidence figures and those suggested for elementary and secondary schools reveals a much higher percentage for the community college. Speech/language and hearing programs have traditionally been established at the elementary school level on the basis of a 4 to 5% incidence of speech disorders. The secondary school programs report incidence figures of between 2 and 4%.
>
> In 1973 a needs assessment study was done at West Valley College as part of a research fellowship grant. The results of that study are as follows:
>
> Two groups of undergraduate students at West Valley College

were surveyed as to their speech and hearing needs. The first group, Group A, was composed of 627 students enrolled in physical education classes. The second group, Group B, was composed of 561 students enrolled in speech communication classes. The students filled out information cards on a voluntary basis. The data from the cards were processed by computer. Cards were sorted alphabetically, and care was taken to eliminate duplicate information. Fifty cards were selected for further screening. Twenty-five cards indicating interest in speech and hearing services were randomly selected as were twenty-five cards indicating no such interest. Of these fifty selections, forty-three contacts for further evaluation were completed.

Results of the initial screening revealed that of the total 1188 students surveyed, 200 indicated concern about a speech or hearing problem, and 131 (10%) indicated an interest in speech and/or hearing services. Fifty-six students indicated that although they had no problem, they would be interested in such services for a family member. The majority indicated that they would prefer such services to be offered on an individual basis.

Results of the second screening of forty-three individuals revealed that of the twenty-four students indicating an interest in services (9 hearing, 15 speech) all hearing concerns seemed justified on the basis of reports of obvious decibel loss, frequent ear infections with associated loss, medical diagnosis of loss, and reduced communication skill due to loss. Of this number, three students were known to require clinical services beyond audiometric screening and medical referral. Of the students concerned about their speech, eight were found to have deficits severe enough to warrant clinical remediation. Of the nineteen students indicating no interest in service, only one revealed a speech deficit.

It is felt that this study indicates a need for further research. Approximately 10% of the students surveyed indicated they were concerned about their speech and/or hearing and would be interested in this type of service. A small sample revealed that of this number, approximately 4% may have deficits which warrant clinical remediation. This suggests that approximately 4% of the total college population may exhibit discrepancies in linguistic competency.

In the Spring of 1974, as part of the consultant's duties, a questionnaire pertaining to needs for speech and hearing services was distributed at the Saratoga campus. The results of this questionnaire are as follows:

Information gathered from 612 students enrolled in Occupational Education programs at West Valley College revealed that 114 (19%) would seek services if they were available. A breakdown of specific responses follows:

166 (27%) indicated concern about their present communication ability.

213	(35%)	were interested in having speech/ language and hearing services offered on campus.
66	(11%)	were concerned about a speech deficit.
		35 interested in articulation therapy
		4 interested in stuttering therapy
		22 interested in voice therapy
59	(10%)	were concerned about a hearing deficit.
		43 interested in hearing testing
		7 interested in lipreading
		12 interested in auditory training
44	(7%)	were concerned about a language deficit.
		28 interested in Oral English as Second Language
		11 interested in Aphasic programs
66	(11%)	were interested in services for a family member

This study reveals primarily the same percentage of need as the study made in Southern California by Mrs. Terry Ratkevich. It is also felt that follow-up studies would reveal primarily the same findings as found in the study by Dr. Butler and Betty Price in 1973. It is felt that one could safely assume that a clinical percentage of deviations would be in excess of 4%.

Support for this program has been shown by West Valley College in several ways. Primary prerequisites for a successful clinical program are the dissemination of information regarding available services and direct referral of potential clients by instructors. Therefore, members of the West Valley faculty were asked to respond to a brief three-question survey concerning their willingness to distribute information and to refer students for remedial services. Fifty-one members responded. The results are as follows:

I would be willing to distribute printed information concerning the availability of Speech/Language and Hearing Services to students I felt would benefit.

49 Yes 2 No

I would be willing to send a referral list of students who I feel would benefit to the Speech and Hearing Clinic for dissemination of information and follow-up by their staff.

41 Yes 10 No

I would personally direct a student with either speech, language or hearing problems to seek services for remediation of the deficient skill.

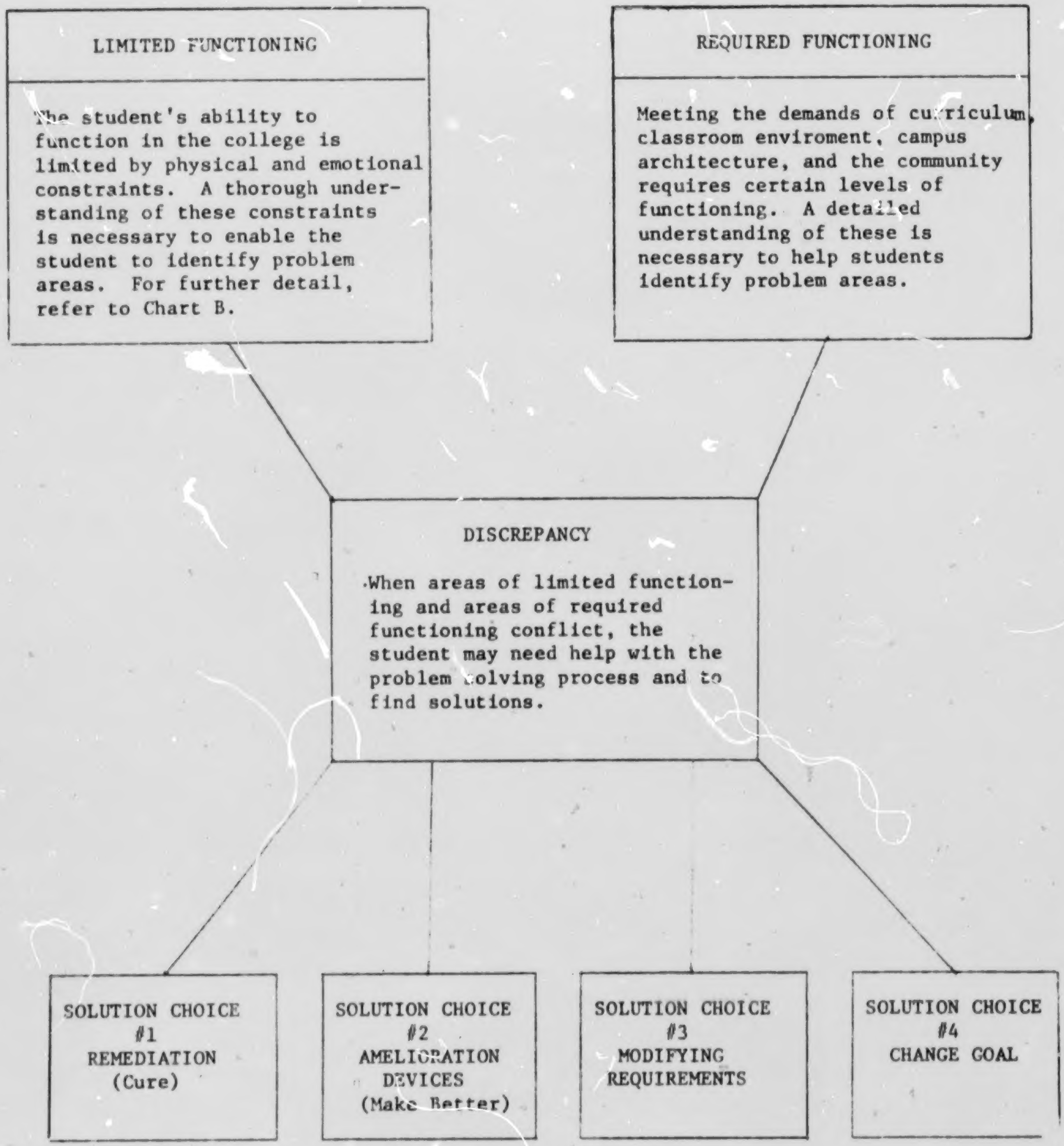
46 Yes 5 No

Proposed Programs and Services - Identification

For students to have the optimum chance to succeed in the college mainstream, the identification and thorough assessment of areas of limited functioning is critical. West Valley College is convinced that we can best mainstream students with special needs if the systems to assess and meet those needs are also mainstreamed. The college has chosen to develop and expand regular college programs to meet both the specialized needs of students with handicaps, as well as the needs of other students. Therefore, regular college programs have been instituted to maximize communication and provide a network where comprehensive evaluation is both possible and practical.

Chart A represents the problem identification and solving process for students with limited functioning Chart B details the college plan for identifying limited functioning through screening and diagnostic procedures. Chart C details the college units which assist in problem solution.

Chart A - Problem Identification and Solving Process



LIMITED FUNCTIONING

The student's ability to function in the college is limited by physical and emotional constraints. A thorough understanding of these constraints is necessary to enable the student to identify problem areas. For further detail, refer to Chart B.

REQUIRED FUNCTIONING

Meeting the demands of curriculum, classroom enviroment, campus architecture, and the community requires certain levels of functioning. A detailed understanding of these is necessary to help students identify problem areas.

DISCREPANCY

When areas of limited functioning and areas of required functioning conflict, the student may need help with the problem solving process and to find solutions.

SOLUTION CHOICE
#1
REMEDIATION
(Cure)

SOLUTION CHOICE
#2
AMELIORATION
DEVICES
(Make Better)

SOLUTION CHOICE
#3
MODIFYING
REQUIREMENTS

SOLUTION CHOICE
#4
CHANGE GOAL

Chart B

Screening and Diagnostic Plan

Screening and diagnosis is the primary vehicle for identifying the student population to be served. The following chart illustrates the comprehensive plan for screening and diagnosis of students' special needs. We have defined screening (S) as a routine check with a predetermined set of criteria of the population served by the identified program or service. Diagnosis (D) is defined as the use of specific evaluating instruments to determine the student's functioning level or causation of disability.

Limited Functioning

Identified College Programs and Services	Reading	Spelling	Auditory-Perceptual	Language	Visual-Perceptual	Writing	Hearing	Visual Acuity	Neurological	Emotional	Intelligence	Social-Enviromental	Social-Interpersonal	Mobility	Motor-Co-ordination	Financial	Current Vocational Standing/History	Vocational Potential
Enabler	S			S		S	S	S		S/D	S	S/D	S/D	S/D	S/D	S/D	S/D	S/D
Speech	S/D	S/D	S/D	S/D	S	S/D	S/D			S		S	S/D	S	S	S	S/D	
Learning Disabilities	S/D	S/D	S	S/D	S/D	S/D	S	S	S	S	S	S	S/D	S	S/D		S/D	
Counseling	S	S		S		S				S/D	S/D	S/D	S/D			S	S/D	S/D
Health							S	S	S/D	S	S	S	S	S	S/D	S	S	
Reading	D	S/D	S	S/D	S/D			S	S		S							
Writing	S	S	S	S/D	S	S/D									S			
Adaptive Physical Education														S/D	S/D			
Faculty	S	S		S		S					S		S					
Financial Aid										S		S		S		S/D	S	S
Community Agencies	S/D		S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D	S/D
Tutorial Services	S	S		S		S	S	S		S		S	S		S	S	S	
EOPS	S	S		S		S				S	S	S	S			S/D	S	S
REP	S/D	S	S	S/D	S	S/D	S	S	S	S/D	S	S/D	S/D	S	S	S/D	S	S

Chart C - Problem Solutions

Solution Choice #1 REMEDIATION (Cure)	Solution Choice #2 AMELIORATION DEVICES (Make Better)	Solution Choice #4 MODIFYING REQUIREMENTS	Solution Choice #4 Change Goal
Speech	Enabler	Enabler	Enabler
Reading	Speech	Health	Speech
Writing	Health Office	Faculty	LEAP
Adaptive P.E.	Adaptive P.E.	Community Agencies	Counseling
Faculty	LEAP	LEAP	Health
Community Agencies	EOPS	EOPS	Community Agencies
Health Office	Financial Aid	Speech Program	
Enabler	Community Agencies	Advisory Committee	
Counseling	Tutorial		
Tutorial			
REP			
LEAP			

Proposed Programs and Services - Descriptions

The program and services described in this plan, those in operation and those projected, have been designed to meet the diverse educational needs of the West Valley College student population. The special needs of the communicatively, learning, and physically disabled residents of the District have been considered in the design. Planning for meeting these diverse needs has included staff and resource people from all segments of the college. As a result, the following programs and services are components of various organizational units of the college and draw upon the expertise of personnel in many disciplines.

Learning Services

Learning Services, an instructional support system, coordinates between activities that have as their primary purpose the assisting of students with their regular college program. The support system has as its components specialists in learning skills, counseling, courses utilizing prescriptive planning and individualized instruction, programs designed for specific populations, and tutoring assistance.

The specialists in learning skills are drawn from Speech, English, Reading, Learning Disabilities, Counseling, and Math. Courses include Reading Skills, Writing Skills, Speech Development Laboratory, Personal Growth, and Learning Efficiency Assistance. Counseling is provided in personal and vocational adjustment, academic planning, vocational goal-setting, and assessment of learning skills. The emphasis in Learning Services is on maintaining students within the regular College program. Students with special needs may be served by one or more of the components of Learning Services.

Speech-Language-Hearing Program

The ability to communicate effectively is of primary importance in social, academic, emotional and professional relationships. The Speech/Language and Hearing labs help students in developing communication skills which are essential to effective interaction.

The students' benefit by being helped to speak and listen efficiently. They gain in the knowledge of communication skills and develop their ability to compensate for their deficits. Most often this improvement is reflected in improved self-image, personal and social adjustment and understanding of others.

The lab provides special assistance on an individual and/or small group basis to students with speech, language and hearing deficits. The three components of the program cover articulation and production, stuttering, voice problems, oral English/second language, language for asphasics, lipreading, auditory training and hearing testing.

The program goals are to provide direct, intensive and individualized clinical services to effect positive changes in the communication behavior and to provide information and assistance to other disciplines.

The Speech-Language-Hearing Program is staffed by a Speech Pathologist, a part-time Audiologist and two aides. Betty Price, the Speech Pathologist, is responsible for coordinating the program, as well as providing prescriptive planning and instruction for a maximum of 45 students. The 45/1 student-instructor ratio is based on State recommendations. Individual diagnosis of limitations and one-to-one/small group instruction is provided in a program combining 25 student contact hours/week from the Speech Pathologist, 16 student contact hours/week by the Audiologist, and 36 student contact hours/week by Educational Aides under the direct supervision of the Speech Pathologist. An additional 22 students is projected and will be served by hiring an additional Speech Pathologist for 12 hours.

Betty Price, the Co-ordinator, holds a California Community College credential in Special Education, is a California Licensed Speech Pathologist, and has been certified as a Speech Pathologist by the American Speech and Hearing Association.

Learning Efficiency Assistance Program (LEAP)

The Learning Efficiency Assistance Program will serve students at West Valley College who have specific learning disabilities which prevent them from succeeding in the mainstream of the college curriculum. LEAP is designed to provide service to all students with learning disabilities whose needs are not met in other programs, or who need support services to maintain placement in these programs.

The LEAP program will provide students with assessments of their skills, a survey of the college's educational resources, and individual programs to ameliorate or remediate their special needs in learning. The program will be multi-disciplinary in approach, using counseling, speech/hearing, psychology, English, math and other services and agencies to provide the students with an effective analysis of their learning dynamics. The program will then provide the student with educational resources such as individual learning programs and recommendations for college courses that could help to expand his or her potential as a human being. Individual and small group sessions for learning will be utilized.

The LEAP program is staffed by a Learning Specialist who holds a California College Credential - Learning Specialist, educational aides and tutors. Jim Peck, the Learning Specialist, is responsible for co-ordinating the program, as well as providing diagnosis of learning disabilities and prescriptive planning and instruction for 32 students per semester, a number based on State recommendations. An additional 15 students will be served by hiring a Learning Specialist for 12 hours per week. Individual diagnosis of limitations and one-to-one small group instruction is provided in a program combining 25 student contact hours/week from the Learning Specialist, 5 student contact hours/week by the school psychologist, 54 student contact hours/week by educational aides, and 36 student contact hours/week by tutors. Educational Aides and tutors are presently under the direct supervision of the Learning Specialist.

Re-Entry Program (REP)

The Re-Entry program provides educational and support opportunities for people who are not prepared to enter the existing traditional college system because of unique needs. The program consists of one semester of intensive courses in communications skills and personal development. Forty-five applicants are chosen for the program each semester to take the core curriculum. Students are selected after reviewing their applications, evaluating their writing samples, and from interviews conducted by the REP counselor. Selection is made to achieve diversity within the group and at the same time to meet the needs of disadvantaged students in the community population as well as on the basis of the individual student's potential for benefiting from the program. All the courses offered in the program are also available in the regular college schedule. Regular college credit is awarded to students upon completion of the courses.

Reading Skills Lab

The Reading Skills Lab will provide individualized instruction for any student, either instructor-referred or self-referred, in the following basic skills: comprehension; word structure analysis; vocabulary development; auditory and visual discrimination; study skills; reading rate improvement. Auto-instructional materials, written as well as audio-visual, will be individually assigned, based on careful diagnostic testing and a conference with the lab instructor. Trained tutors and certificated instructors sensitive to student needs will be available to help insure students' success.

Writing Skills Lab

The Writing Skills Lab is available to all students who need help with basic writing skills; either "Mechanics of Writing," English 75A, which provides instruction in such aspects of writing as punctuation, agreement problems, etc.; or "Sentence Structure," English 75B, which will help students avoid sentence fragments and awkwardness, in addition to teaching logical and appropriate variation in sentence structure. Self-paced , auto-instructional materials will allow students to progress at their own pace; trained tutors and certificated instructors who are sensitive to student needs, will be available to help insure students' success.

Tutorial Assistance

Peer tutoring is now available for economically and educationally disadvantaged students through the college's Self-Help Center. Planning for college-wide tutorial services is underway, and based on a campus-wide tutoring needs assessment of faculty and students completed in the Spring 1977, those services will be implemented in 1977-78. A tutor training curriculum has been designed, and a tutor training course was initiated in the Spring 1977. Skill tutoring is already a component of the LEAP, Adaptive PE, and the REP programs. In the 1977-78, diversified tutoring will be co-ordinated by a certificated Tutorial Co-ordinator.

Counseling

Consistent with its philosophy of responding to the educational needs of the community and recognizing the varied purposes of education for the diverse groups and individuals within the community, West Valley College realizes that its responsibility is to give every possible aid to its students to assist them to develop into mature, responsible citizens. The college, therefore, makes available to all students a comprehensive and organized program of counseling, guidance and special services.

The primary focus of the counseling program is to assist students to "find themselves," to clarify their values and goals, to make decisions and develop self-confidence and self-direction so as to enhance their sense of self-esteem and move toward maximizing their achievement and expediting their educational progress. Members of the counseling staff are available to assist students with educational planning and advisement, job and career counseling, counseling with regard to personal concerns affecting their educational progress and to assess their skills and aptitudes through a comprehensive program of testing and assessment services.

Responding to the diverse educational needs of persons within the community necessitates the establishment of a program of special services. The Educational Opportunity Program and Service is aimed to recruit and assist disadvantaged persons to achieve success in the educational environment. In addition, special emphasis is placed on attempting to serve students of all ages (veterans, returning women and mid-career people) who are in the process of assessing skills and making career choices and changes. Special needs of students whose functioning is limited by disability are served through the office of the Counselor/Enabler.

Counselor/Enabler Services

It is the function of the Enabler office to mediate between the limited functioning of a student and functioning requirements to carry out individual educational objectives. The student's functioning is a combination of his/her physiological and psychological states. With various combinations of services, the Enabler office addresses itself to overcoming barriers caused by physical problems, emotional adjustment, and lack of information and attitudes of the College and community.

Counseling

Students may or may not find complications in dealing with and adjusting to school when coping with limitations. For some students these limitations may be causing complications with life as a whole. The one-to-one counseling and problem solving available through counseling services in general are supplemented by the Enabler office. The Enabler works with counselors to help them meet needs of disabled students throughout the counseling services. The Enabler also works on special needs of students on a one-to-one basis. For those who want to interact with others and share personal growth, there are classes developed to meet these needs. An emphasis is placed on developing a warm supportive atmosphere that focuses on problem solving and self-responsibility.

Counselor/Enabler Services (Continued)

Special Parking: Parking spaces in close to buildings are reserved for persons who have trouble walking long distances.

On-Campus Tram: The assistance of a tram is available. The tram picks up students and drops them off at their destinations.

Off-Campus Van: For students who have severe physical limitations that restrict them from using public and private transportation, a van equipped to accommodate wheelchairs is available to help with transportation to and from campus.

Specialized Equipment: Some students' limitations are lessened by the use of adaptive equipment such as tape recorders, print magnifiers and electric wheelchairs. The Enabler office also maintains information on kinds of assistive equipment for both classroom use and home use.

Note Takers

Students who have severe vision, hearing or writing problems may have trouble taking notes in class. Some of these students require the services of a note taker.

Readers

Some classes involve materials that are not satisfactory for taping. Visually impaired students are helped with this material by readers.

Interpreters

Some West Valley College students have no hearing and require the services of an interpreter to interpret lectures into manual communication.

Registration Priority

Students who need to schedule classes to meet special problems are accommodated through early registration.

Counselor/Enabler Services (Continued)

Notification of Instructors

Some students may have problems they would like instructors to know about. When requested by the student, the Enabler office contacts the instructor and assists him/her and the student to work with the problems.

Liaison with Faculty

One role of the Enabler is to assist faculty to work out problems and accommodate students' needs without jeopardizing the quality of education.

Community Liaison

Community agencies are an important source of information and support services for students. The Enabler works to help student make efficient use of available services and helps to educate the community about West Valley services. The Enabler also works as an advocate for the student in the community.

Adaptive Physical Education

The Physical Education Department offers classes that allow persons with limited physical capacity to design exercise programs to meet their special needs. These classes assist students to maintain and increase physical capacity, increase endurance and develop coordination.

Financial Aid

West Valley College strives to provide equal access to higher education. One of the most common barriers to education is the lack of funds. The College actively seeks federal, state and local funds to aid as many students as possible who NEED aid to pursue their education. A nationally recognized need analysis system is used as the basis for determining a reasonable expected family contribution. The student

Financial Aid (Continued)

should be striving to attain some college degree or certificate. The parents have the primary responsibility for providing funds to meet the educational costs for their son or daughter. Financial aid is available ONLY to fill the gap between the family contribution and the student's expenses.

Students at West Valley College receive financial aid from the following local, state and federal aid programs:

Federal

College Work Study, CWSP
National Director, Student Loans (NSDL)
Supplemental Educational Opportunity Grants (SEOG)
Basic Educational Opportunity Grant (BEOG)
Federally Insured (Guaranteed) Student Loans

State

Extended Opportunity Programs and Services, EOPS
College Opportunity Grants
Occupational Education and Training Grants

Local

West Valley College Scholarships

Health Services

Registered Nurses and a Medical Secretary are available to day and evening students. An on-campus physician is also available to students on a part-time basis. Treatment of medical problems and illnesses include:

A. Short-term treatment by campus physician on appointment basis

B. Treatment of minor ills, colds, sore throats, etc., by physician or nurses under standing orders of the physician.

C. Complete family planning and gynecology services

First aid for sudden accident or illness and a temporary rest area for sick students is available through the Student Health Service. Satellite first-aid kits are located throughout the campus for immediate self-care until students can contact the Health Service. Transportation is available for the injured or ill student to private physician, medical facility, or home, if needed. Referrals are made to private community agencies for chest x-rays, immunizations, pregnancy and venereal disease treatment and control. Audiometric testing and referrals are offered weekly. A Flu inoculation program is conducted each Fall.

Extended Opportunity Programs and Services (EOPS)

It is stated in the Governing Board's philosophy or objectives of the District: "The College is committed to the policy of providing equal educational opportunities, consistent with the student's ability and preparation, for all people of post high school age, and of recognizing the inherent worth of each individual," and "the College is committed to the policy of accepting, as provided in the law, students of any level of achievement and providing for all students the type of educational opportunities which they need consistent with authorizations given to the community colleges by law." The Extended Opportunities Programs and Services (EOPS) of West Valley College is a program to help the College realize these objectives. EOPS seeks out students traditionally not bound for college level because of economic, social, or language difficulties. The program offers many supportive services to aid these students to successfully complete a program in college. Financial aid, tutorial services, help and friendship from students and professional counseling and advisement are some of the services offered.

Community Agencies

Students do not only exist within the academic setting; they are full members of the community which the college serves. All students needs cannot be met by the services provided through the college programs. Therefore, close, cooperative relations must be maintained with the network of existing community agencies. The interchange of information is critical to the comprehensive assessment and the efficient provision of services necessary to overcome limited functioning. The following are a sampling of the agencies currently utilized by the college:

The Department of Rehabilitation
Rehabilitation Hospitals
Social Security Administration
Local high school districts
Private institutions
Mental Health Agencies
County services

Program Goals, Objectives, Activities, and Evaluation

Program goals, objectives and evaluation methods to determine whether objectives have been met, and related activities are detailed in this section The listings for the primary, funded programs (Enabler, Speech/Language and Hearing, Learning Efficiency Assistance, and Adaptive Physical Education) are detailed. Goals and Objectives have also been included for Learning Services as a system, and other closely related programs; i.e., Reading Skills Lab, Writing Skills Lab, and the Re-Entry Program (REP).

Learning Services

Goal: The primary goal is to "facilitate learning" while being flexible and sensitive to individual and group needs.

Program Objectives	Activities	Evaluation
1.0 Set up a system whereby students at West Valley College who need assistance with present courses or specific skills, can readily find that assistance	1.1 Co-ordinate staff for diagnosis and instructional delivery in prescriptive educational planning.	Instructor/Counselor evaluation by appropriate departments
	1.2 Set up internal organization of services	Written report outlining institutional relationships, procedures, and management
	1.3 Co-ordinate counseling, speech development program, enabler assistance, learning disability program, skills labs, and tutoring	Written report describing programs, number of students served, student evaluation of service
	1.4 Provide central, accessible facilities for programs	Written report evaluating facilities by users
2.0 With college departments, co-operatively develop new courses if none are already available, in study skills, reading, writing, speaking, computation, physical education, and personal development areas, to complete the curriculum to meet student needs	2.1 Survey college offerings in areas identified	Listing of college courses and catalog description in areas identified
	2.2 Write up needed courses with co-operating departments, follow course development through department, division, and curriculum committee	Listing of courses instituted along with course descriptions
3.0 Establish central labs where a student with a diagnosed or self-identified need can obtain assistance	3.1 Provide facilities, furniture, equipment, instructional materials, and support staff for Reading/Writing Skills Lab	Written report to include evaluation of each item by the co-ordinator of the lab as well as student evaluations of materials and educational assistance
	3.2 Meet with Math Department, to describe needs for prescriptive instructional planning for students with math deficiencies	Written report detailing progress

Learning Services

Goal: The primary goal is to "facilitate learning" while being flexible and sensitive
(Cont.) to individual and group needs.

Program Objectives	Activities	Evaluation
4.0 Make information readily available to students at West Valley College about programs, services, and courses	4.1 Provide information about programs for: 1) District Newsheet (Tabloid) 2) Counseling 3) All divisions, departments 4) Student Handbook 5) Special Services (i.e., Veterans)	Written report listing communication tasks completed
	4.2 Provide brochures on individual programs	
5.0 Establish well-defined referral systems between college services, as well as with outside agencies	5.1 Identify referral procedures	Written report listing referral procedures
	5.2 Provide referral forms	Written report with sample forms
6.0 With college departments, co-opertively establish diagnostic testing services	6.1 Identify persons authorized to do diagnostic testing	Evaluation of faculty/counselors' skill in diagnosis by appropriate departments
	6.2 Inform screening agencies or programs of appropriate persons for diagnosis	Survey screening agencies and programs requesting them to evaluate the information they have received
	6.3 Provide diagnosticians with appropriate materials	Request the professional staf using diagnostic materials to submit a written evaluation of materials

Speech/Language and Hearing Program

The ability to communicate effectively is of primary importance in social, academic, emotional, and professional relationships. The program will assist speech/language and hearing handicapped students in developing communication skills which are essential to effective interaction. The students will benefit by being helped to express their thoughts clearly in speaking and to listen efficiently. They will gain in the knowledge of their physiological disability and their ability to compensate for their deficit. The improvement attained will be reflected in improved self-image, personal and social adjustment, and understanding of others.

The Speech/Language and Hearing Program will provide:

A. Services...	Communication Disorders	Deviations
Population Served.....	Students with severe language, voice, fluency, articulation, or hearing disorders	Students with mild to moderate deviations in language, voice, fluency or articulation, and those with mild hearing loss requiring minimal aural/oral rehabilitation procedures. English as a second language should be included as a service but not charged to handicapped funds
General Goals......	1. Provide direct, intensive, and individualized clinical services to effect positive changes in the communication behavior of clients with handicapping disorders	Provide direct and/or indirect clinical services to improve clients' communication skills and competencies
	2. Provide information and assistance to other disciplines	
	3. To aid speech/language and hearing handicapped students in developing the communication skills necessary for effective social interaction	

Speech/Language and Hearing Program

Goal I: Develop a Speech/Language and Hearing Program which is responsive to student needs

Program Objectives	Activities	Evaluation
1.0 Organize an Advisory Committee	1.1 Extend invitations to concerned community members	Formation of a Speech/Language and Hearing Program Advisory Committee
	1.2 Call Committee meetings as needed	Written minutes of all Committee meetings
	1.3 Distribution of Committee findings and recommendations to all allied programs with the request for any comments or further professional input	Maintain a list of allied programs for mailing and the collection and forwarding of comments to the Committee
2.0 Establish working relationships with community agencies	2.1 Establish an intern program with San Jose State University	The placement of interns in the program
	2.2 Maintain contact with feeder schools	Request for information and enrollment of students from high school programs
	2.3 Initiate contact with private practitioners and agencies	Requests for information and referral to program
3.0 Cooperate with Departments to devise new course proposals	3.1 Consult and prepare course proposal	Acceptance of written proposal by Department
	3.2 Present course outline to Curriculum Committee	Acceptance of written proposal by Curriculum Committee

Goal II: Facilitate effective and efficient communication skills

Program Objectives	Activities	Evaluation
1.0 Improve articulatory skills and therefore increase intelligibility in spontaneous, conversational speech	1.1 Appropriate screening, diagnostic assessment and/or referral	Initial evaluation of student's speech regarding initial objectives
	1.2 Auditorily contrast between sounds in error with those which are being substituted (auditory discrimination)	Written progress reports and self-evaluation
	1.3 Heighten tactile, visual and auditory cues of the corrected sounds in isolation and single syllables (phoneme production)	Written progress reports and self-evaluation
	1.4 Exercises involving production of the corrected sound in various phonemic environments following the progression of isolated words, sentences and conversational speech	Final evaluation of student's speech regarding accomplishments and recommendations for termination or continuance of sessions and peer evaluation of student's speech intelligibility
	1.5 Training in written exercises relevant to dysfunction - e.g., International Phonetic Alphabet, Standard Diacritical Markings	Written examination
2.0 Improve the receptive and expressive utilization of language, thereby increasing practical language skills	2.1 Appropriate screening, diagnostic assessment and/or referral	Initial evaluation of student's speech regarding initial objectives
	2.2 Auditory, visual and/or verbal training concentration on the specific area of weaknesses as indicated by the diagnostic evaluation	Written progress reports and student evaluation

Goal II: Facilitate effective and efficient communication skills (Cont.)

Program Objectives	Activities	Evaluation
2.0 Improve the receptive and expressive utilization of language, thereby increasing practical language skills	2.1 Phonology Ability to identify, integrate, and imitate sounds; ability to put sounds together to make meaningful words	Written progress reports and student evaluation
	2.2 Morphology Vocabulary Usage-Word Meaning, Grammatical Forms, Verb Tenses, Pluralities, Prefixes and Suffixes, Inflections and Derivational	
	2.3 Syntax Sentence Construction, Grammatical Structure, Word Order, Phrases and Transformations	
	2.4 Semantics The ability to successfully utilize language as a symbolic process, as it is the basic tool for Concept Formation (e.g., classification, critical analysis, logical thinking and problem solving)	
3.0 Increase the amount of fluency and thereby improve overall intelligibility and efficiency in conversational speech	3.1 Appropriate screening and diagnostic assessment and/or referral	Initial evaluation of student's speech regarding initial objectives
	3.2 Exploring specific speaking situations and enviroments involving high probabilities of nonfluent speech	Written progress reports and self-evaluation
	3.3 I.D. of various stuttering behaviors	Written progress reports and self-evaluation

Goal II: Facilitate effective and efficient communication skills (Cont.)

Program Objectives	Activities	Evaluation
3.0 (Cont.) Increase the amount of fluency and thereby improve overall intelligibility and efficiency in conversational speech	3.4 Variation of existing stuttering behaviors and utilization of these variated techniques in specific speaking situations	Final evaluation of student's speech regarding accomplishments and recommendations for termination or continuance of sessions and peer evaluation of student's speech intelligibility
4.0 Improve vocal quality, duration and/or pitch thereby increasing intelligibility in conversational speech	4.1 Appropriate screening, diagnostic assessment and/or referral	Initial evaluation of student's speech regarding initial objectives
	4.2 Detailed and illustrated explanation of normal vocal mechanism and of student's improper utilization or specific pathology involved	Written progress reports, self-evaluation, and student reiteration of knowledge
	4.3 Exploring specific speaking situations and environments involving high probability of poor vocal quality, duration or pitch	Written progress reports and self-evaluation
	4.4 Practical utilization of exercises which utilize the vocal mechanism with the maximum of proper production and a minimum of effort	Final evaluation of student's speech regarding accomplishments and recommendations for termination or continuance of sessions and peer evaluation of student's speech intelligibility
5.0 Improve articulation, prosody, grammar and vocabulary in both written and verbal speech so as to increase correct utilization and understanding of American English for foreign students	5.1 Appropriate screening and diagnostic assessment and/or referral	Initial evaluation of student's speech regarding initial objectives
	5.2 Utilization of articulation therapy where indicated	Written progress reports and self-evaluation
	5.3 Exercises practicing the intonation of conversational, American English	Written progress reports and self-evaluation
	5.4 Teaching practical idiomatic phrases of which a large portion of American English is comprised	Written progress reports and self-correction and evaluation of written exercises assigned in conjunction with this activity

Goal II: Facilitate effective and efficient communication skills (Cont.)

Program Objectives		Activities	Evaluation
5.0 (Cont.) Improve articulation, prosody, grammar and vocabulary in both written and verbal speech so as to increase correct utilization and understanding of American English for foreign students	5.5	Written exercises combining the expansion of practical vocabulary and correct grammatical constructions	Written progress reports and self-correction of assigned exercises
	5.6	Practical verbal conversations and verbal and written summarizing of phrases to increase understanding and utilization	Final evaluation of student's speech regarding accomplishments and recommendations for termination or continuance of sessions and peer evaluation of student's speech intelligibility
6.0 Provide hearing screening, diagnostic, and remediation/amelioration	6.1	Appropriate screening, diagnostic assessment and/or referral	Initial evaluation of student's hearing and speech regarding initial objectives
	6.2	Provide courses in lip reading such as, "I See What You're Saying," as offered through Community Services or Speech Development Lab	Written progress reports and student evaluation
	6.3	Provide auditory discrimination testing and therapy as indicated by diagnostic results	Written progress reports and self-evaluation. Final evaluation of student's deficit and accomplishments and recommendations for termination or continuance of sessions. Peer evaluation of student's speech intelligibility, if pertinent

Learning Efficiency Assistance Program (LEAP)

Goal I: To assist those students with specific and unusual learning problems to succeed in the regular college program, on the job, or in other daily life experiences.

Program Objectives	Activities	Evaluation
To assist the student:		
1.0 Identify specific learning strengths and weaknesses related to educational demands	1.1 Establish a diagnostic system consisting of standardized testing, and cognitive mapping, of each student's learning status who has been referred to LEAP.	A written document listing diagnostic tools used and number of students evaluated
2.0 Establish personal obtainable educational goals	2.1 Provide guidance for students in developing obtainable educational goals based upon the results of diagnostic information	Student records containing personal goals and objectives
3.0 Develop and improve adequate: a. Visual Perception b. Auditory Perception c. Motor Perception d. Directionality e. Temporal Perception	3.1 Provide programmed instructional material designed to improve perceptual competencies	A written document listing materials, and activities, and personnel
	3.2 Provide persons trained in instructional techniques for the perceptually handicapped	
4.0 Develop and improve beginning and intermediate reading and spelling skills	4.1 Design, select, and provide reading programs to improve the reading and spelling skills of all students with specific learning disabilities	A written document indicating statistical reports on student pre- and prost-testing scores
	4.2 Make use of the reading lab in Learning Services for appropriate students	
5.0 Develop and improve beginning and intermediate math skills	5.1 Design, select, and provide math programs to improve the math skills of all students with specific learning disabilities	A written document indicating statistical reports on students' pre- and post-testing scores

Learning Efficiency Assistance Program (LEAP)

Goal I: (Cont.) To assist those students with specific and unusual learning problems to succeed in the regular college program, on the job, or in other daily life experiences.

Program Objectives	Activities	Evaluation
6.0 Develop and improve written skills	6.1 Design, select, and provide materials and programs to improve written communication skills for students with specific learning disabilities	A written document indicating status of students' written performance
	6.2 Make use of the writing lab (Learning Services) for appropriate students	
7.0 Develop and improve social communication skills	7.1 Provide and encourage students enrolled to seek social opportunities within the college curriculum and within the program	Student evaluation of personal feeling related to their own social communication skills after working in LEAP
8.0 Develop and improve self-image	8.1 In cooperation with the Counseling Department, develop Personal Growth Groups designed to expand and develop self-esteem and social competencies	Student evaluation of personal feeling related to self-esteem. Standard psychological tests to evaluate status of persons felt to have poor self-esteem during initial evaluation phase
9.0 Develop and explore career opportunities	9.1 In cooperation with the Career Center, develop courses appropriate for students enrolled in LEAP	A written document reporting career related courses which enroll LEAP students
	9.2 Make use of career courses offered, for appropriate students	
10.0 Develop positive alternatives for students with functional limitations in specific educational, occupational, and social settings	10.1 Develop materials and courses and provide instructors necessary to inform students with functional limitations in educational, occupational and social settings about alternative behaviors	A written document listing materials, activities, courses and instructors providing information to alternative behaviors for students with functional limitations

Learning Efficiency Assistance Program (LEAP)

Goal II: To develop a program which will assist those students with specific and unusual learning problems to succeed in the regular college program, on the job, or in other daily life experiences.

Program Objectives	Activities	Evaluation
1.0 To organize educational assistance, including instructional aides and tutors for some students	1.1 In cooperation with the Tutoring Co-ordinator, develop courses, collect materials, and identify appropriate instructors for training instructional aides and tutors	A written document listing number of instructional aides and tutors giving service to students. This document to include contact hours and in-service training hours. Provide job descriptions for tutors and aides
	1.2 Establish schedules, in-service training, and hire appropriate persons to serve students in LEAP	
2.0 To establish an extern program for Learning Disabilities' instructors with appropriate university and college background	2.1 Make contact with the appropriate personnel through letters and phone calls, at appropriate universities and colleges to establish an extern training program.	A written report detailing persons and institutions contacted
3.0 To establish an effective referral system within the college	3.1 Work with the Learning Services committee, attend department meetings, distribute program brochures, present informational material at faculty development days	A written document listing agencies, persons and programs to which students were referred. This document to include the number of students referred to each area
	3.2 With Learning Services, develop and evaluate referral forms	
4.0 To establish an effective referral system with community agencies	4.1 Gather information on all programs, courses and persons related to community agencies who could be of benefit to each student referred to LEAP. Share this information with the student where appropriate	A written document listing number of students referred and identifying the community agencies to which students were referred

ENABLER SERVICES

Goal: The primary goal is to integrate students with limited functioning into the educational institution and ultimately into society, at a level which is commensurate with their potential.

Program Objectives	Activities	Evaluation
1.0 Modify West Valley's attitudinal barriers for easy integration of handicapped students through:	1.1 One to one in-service training. 1.2 Increased contact with instuctors. 1.3 Increased counselor availability to faculty. 1.4 Availability of written material 1.5 Group in-service. 1.6 Organized discussion, group-training to answer faculty needs.	Preparation and implementation of inservice training for counseling staff.
2.0 Minimize future barriers to handicapped students by:	2.1 Consulting with developing areas of the school. 2.2 Investigating ways and recommending modifications to existing architectural barriers. 2.3 Recommending expansion of special parking areas.	Contact with personnel of developing and expanding programs and those persons within the college responsible for modifying architecture.
3.0 Increase the accessibility of program services to students facilitating the providing of quality and reliable services.	3.1 In-service training of those involved in providing services. 3.2 Development of simple and concise procedures. 3.3 Development of written descriptions of services. 3.4 Work with new clerical support person on office procedures manuals for same.	Preparation of written manual.
4.0 Maintain the funding for appropriate existing services and insure the ability to expand such funding to needed services.	4.1 Maintenance of audit trails to meet the needs of district, state, and federal requirements. 4.2 Accurate and prompt filing of reports. 4.3 Development and submission of necessary program plans to meet VEA and state excess cost and district funding requirements. 4.4 Maintain and update needs analysis. 4.5 Develop and submit data and projections of district needs as required. 4.6 Obtain and maintain required medical documentation.	Existence of accurate and comprehensive records.

ENABLER SERVICES

	Program Objectives		Activities	Evaluation
5.0	**Minimize segregating and labeling and designating of students needing services as different.**	5.1	Focus on services needed, rather than what kind of student to be served.	Development of program descriptions in terms of service components.
		5.2	Group students by functional limitations and needs, rather than identifying them by disability category.	
6.0	Monitoring of counseling and services for quality and appropriateness.	6.1	Developing and submitting state program evaluation.	Student evaluation.
		6.2	Self-evaluation on an on-going basis.	
		6.3	Soliciting of student input through questionaires.	
		6.4	Encourage students and provide an atmosphere in which students are comfortable giving verbal input both positive and negative.	
7.0	Providing of supportive services necessary to maintain student with limited functioning in the college's mainstream environment.	7.1	Maintain transportation system.	Maintaining opperative support services. Student input of the appropriateness and effectiveness of service.
		7.2	Provide tram service for mobility assistance	
		7.3	Provide assistance of instructional aides.	
		7.4	Provide service of manual communication interpreters.	
		7.5	Provide counseling services.	
		7.6	Provide assistance of non-instructional aides.	
8.0	Expand communication and cooperation between college and community agencies.	8.1	**Develop easier and more efficient flow of students between West Valley College and the Department of Rehabilitation**	Increased community awareness of college services.
		8.2	**Provide information on services available to students and prospective students of West Valley College**	

ADAPTIVE PHYSICAL EDUCATION

GOAL: To maintain and increase the physical capabilities of students with specialized needs.

	Progran Objectives		Activities	Evaluation
1.0	Planning and implementation of a variety of activities to meet specialized student needs.	1.1	Review current activities for skill development, recreation and rehabilitation needs.	Written recommendation
		1.2	Investigate community needs.	
		1.3	Elicit community, student, and faculty imput.	
		1.4	Analyze alternatives.	
2.0	To develop an individualized exercise program.	2.1	Contact personal physician for information regarding restrictions and recommendations.	A plan for each student.
		2.2	Determine the students short and long term goals.	
		2.3	Evaluation of present functioning.	
		2.4	Determination of appropriate exercise program.	
3.0	To develop strength, endurance, flexibility, balance, coordination, and general fitness.	3.1	Recreational activities within context of present class structure.	Student participation and progress.
		3.2	Exercise programs	
		3.3	Instruction in procedures.	
4.0	To improve or develop basic physical skills.	4.1	Recreational activities within context of present class structure.	Student participation and progress.
		4.2	Exercise programs.	
		4.3	Instruction in procedures.	

Reading Skills Lab

Goal: To provide individualized programs for development of student reading competencies **enabling** them to function at optimum level in the "regular" college curriculum.

Program Objectives	Activities	Evaluation
1.0 To diagnose individual reading competency in the areas of auditory and visual discrimination, word attack, vocabulary proficiency, study skills, comprehension and rate; to refer to other services as necessary	1.1 Standardized testing, informal reading inventory, Area assessment instruments, individual conferences and personal data inventory	Comparison of pre- and post-test results on instruments previously indicated. Instructor/student conference evaluation. Instructor observation
2.0 To design individual programs to develop these competencies through the use of materials which incorporate the various learning modalities	2.1 Use of modular instruction incorporating graded materials including programmed texts, cassette programs, reading machines, books, and pamphlets, and instructor constructed materials	Continuous self-testing evaluation is provided within the learning modules. Instructor observation
3.0 To utilize flexible instructional patterns which permit each student to progress as rapidly as individual learning abilities permit	3.1 Modification of pre-designed modules as needs are indicated through instructor/student conferencing, through student request, or through evolving needs of the student population seen to be served through the reading lab program	Instructor/student conferences. Recording of informal-feed-back received by aides and instructors as well as the use of a student evaluation form

Writing Skills Lab

Goal: To improve student skills in the use of mechanics and sentence structure using prescriptive planning and instruction

Program Objectives	Activities	Evaluation
1.0 Diagnose students' skill levels and prescribe appropriate instructional materials	1.1 Prepare instruments to evaluate and instruct in deficit writing skills	Student evaluation of program and materials
	1.2 Provide instruction in several modes	
2.0 The student will be able to demonstrate his knowledge of the principles of basic sentence patterns, phrases, and clauses, and proper sentence structure	2.1 The student will learn the principles of basic sentence structure, phrases and clauses, by completing the appropriate exercises and practice tests in each of the first seven modules	The student shall pass a post-test for each of the first seven modules at 80% accuracy or better
3.0 The student will be able to demonstrate his knowledge of the principles of subject/verb agreement; adverb, adjective, and pronoun usage; and correct punctuation	3.1 The student will learn the the principles of subject/verb agreement; adverb, adjective, and pronoun usage, and correct punctuation by completing the appropriate exercises and practice tests in modules 8 through 15	The student shall pass a post-test for each of the modules 8 - 15 at 80% accuracy or better
	3.2 The student will consult with the lab instructor for explanation and help as he or she progresses through the modules	
4.0 The student will be able to demonstrate the acquisition of these skills in his writing	4.1 At the conclusion of each module, the student will demonstrate ability to use the skills taught by writing a paragraph correctly using those skills.	Student evaluation of application of writing skills in other college classes

REP - Program (Re-Entry)

The REP (Re-entry) program, while not a primary funded component of Special Education at West Valley College, will serve as a screening agent for students with functional limitations. It may provide an excellent introduction to West Valley College for some students with psychological, communicative, or learning disabilities. The REP program is the only program at West Valley College that is a "vestibule" program; that is, all of the REP students' first semester classes are taught by an identified team of teachers within a block schedule. All courses are designed to raise self-esteem and improve communication skills. This program can serve as a model for any identified group of students that might be best served in this way.

An extensive evaluation of the REP goals and objectives based on student responses has been undertaken each semester. The evaluations have attested to the success of the program as well as having provided an excellent monitoring device. The goals and objectives listed were formulated in November 1973 and January 1974. They still obtain with the exception that the program is no longer limited to women.

Goal:

The goal of the woman's Re-entry Education Program is to provide innovative educational and support opportunities for women who initially would not survive in the existing traditional college system because of unique needs that stem from their economic and psychological dependency.

Objectives:

1. Expose the students to a variety of supportive persons as success models: successful WREP students, men and women teachers and counselors, community lay people
2. Provide comprehensive, intensive and individualized instruction in communication and learning skills which respond to the individual needs of each student on an as needed, as demanded basis.

3. Provide integrated interdisciplinary instruction which applies communication skills to content courses

4. Provide a heterogenous extended family: peers in current WREP group, other WREP students, teachers, counselors and support staff.

5. Provide intensive, supportive, personalized services which respond to the unique needs which result from the economic and psychological dependency of these women.

6. Provide sufficiently varied experiences to help them clarify vocational/educational/personal goals

Co-ordination of Resources - College

The Enabler Services, the Speech/Hearing/Language program, and the Learning Efficiency Assistance program (LEAP) can be considered the primary components of the college's plan for special education. The primary components are co-ordinated by Learning Services where co-ordination is achieved in three ways:

1. through bi-monthly meetings with the Learning Services staff
2. through the location of these activities in one central facility as of March 1, 1977
3. through the organization of Learning Services

The Learning Services bi-monthly meetings, chaired by the Learning Services Co-ordinator, are attended by the following personnel:

Speech Therapist
Learning Specialist
Counselor/Enabler
Tutoring Co-ordinator
Reading Skills Lab Instructor(s)
Writing Skills Lab Instructor(s)
REP Co-ordinator
Bi-Lingual/Bi-Cultural Representative
Math Department Representative
Counselors assisting in Learning Services

Complete minutes of the meetings, including both important information items and decisions, are then disseminated to the participants, the President, the Language Arts Division Chairperson, The Dean of Student Personnel, the Assistant Dean of Counseling, and the Academic Senate President.

In the recent past, all three primary components, Enabler Services, the Speech/Hearing/Language program, and the Learning Efficiency Assistance program, have been housed in widely separated locations. The college is providing new facilities to be operational on April 1, 1977, to house these programs. The facility, centrally located and easily accessible to students, will house the three programs already mentioned along with the Reading and Writing Skills Labs, the Tutorial Co-ordinator's office, a REP center, the Self-Help Tutorial center, and nine faculty offices. Because of these facilities, students will be provided with easy access to services, and co-ordination of all activities will be facilitated. By placing two all-school entities, the Learning Services and the Career Center, in the center of the campus, the college has indicated to students and the staff of the institution that these services are for all students and college-wide in scope.

Control of certified staffing and specific courses and services within Learning Services is retained by the appropriate departments within the college. This insures co-ordination within the college, allows flexibility in staffing, and assures the quality of professional staff and curriculum. Co-ordination of the factvities within the Learning Services is facilitated by the Co-ordinator's responsibility to supervise some classified employees, to manage the Learning Services facilities, and to supervise the budget for instructional supplies and equipment. Information dissemination and interface with other institutional units is a further responsibility of the Co-ordinator.

Advisory Committees

In accordance with West Valley College practice, Advisory Committees for the Speech/Language/Hearing Program and the Learning Efficiency Assistance Program have been formed to aid in the planning and development of viable services for the college community. These committees are composed of representative community members, respected and recognized experts in their field, who assist in the determination of needs and the solution of problems involved in initiating and operating effective programs. They also serve as liaison units which encourage community and college participation in the continuing processess of maintaining, expanding and evaluating viable programs.

Speech/Language/Hearing Program Advisory Committee

Present Committee Members:

Mr. Philip E. DeMarco
Dean, Occupational Education
West Valley College

Dr. Katharine Butler
Director of Speech & Hearing
CSUSJ - President, American
Speech and Hearing Assoc.

Mr. Winston Miller
Speech Instructor
West Valley College

Ms. Vivian Huston
Counselor, West Valley College

Ms. Elizabeth Smith
Speech Therapist, Santa Clara
Unified School District

Ms. Muriel Dickenson
Speech Therapist
Campbell Union School
District

Mrs. Helen Campen Hall
Retired Speech and
Hearing Instructor

Cesar Mayo, M.D.,
Neurologist

Dr. Mary Jensen, Director
Learning Resource Center
West Valley College

Ms. Betty Price
Speech Pathologist
Co-ordinator, Speech/Language/Hearing Program
West Valley College

Learning Efficiency Assistance Program (LEAP) Advisory Committee

Present Committee Members:

Mrs. Clair Ostrowski
CANHC member
Parent and resident of the district

Mrs. Barbara Yore
CANHC member

Dr. Cathleen McDonald
Director of Special Education
San Jose State College

Mrs. Margaret Butler
Learning Specialist
Evergreen College
San Jose, California

Michael Stern, M.D.
Pediatric Neurologist
San Jose, California

Dr. Arthur C. Heinson
Optometrist
San Jose, California

Dr. Chuck Swenson
Psychologist
University of Santa Clara

Jim Peck
Learning Specialist
Co-ordinator LEAP
West Valley College

In-Service Training

The maximum integration of exceptional individuals into our educational setting requires the commitment, the expertise, and the co-operation of the college community. Providing special services for students with limitations brings new student populations to our campus. Students who before had not hoped to benefit from our college, now, because of technology, medical advances, and social acceptance, can expect to participate in college activities and programs. Student expectations and expanded services enable the college to meaningfully serve more and more students that were previously excluded.

Wherever change is in process, in-service training provides for change to happen more quickly, with better quality, and more comfortably for both staff and students. Two kinds of in-service training seem necessary: 1) continuous technical training for the staff of the programs and services dealing directly with students with special needs, and 2) training for attitudinal changes within the general college community.

Technical In-Service Training

The entire staff of Learning Services needs to be continually involved in technical in-service training. Each staff member must have a thorough knowledge of the services provided by each of the other programs. That knowledge should include: 1) general knowledge about diagnostic procedures used, 2) information about instructional strategies and materials used, and 3) an understanding of the various methods used for determining skill levels. Pooling information about effective interview techniques would be helpful. In addition, each staff member should continually up-date his or her knowledge about college and community agencies.

Technical in-service training among the Learning Services' staff will take place in three ways:

1) informal, one-to-one discussions about individual student's needs
2) information items at bi-monthly staff meetings
3) in-service training session(s)

College Community In-Service Training

College in-service training can be used to facilitate understanding, to institute change, and to provide for a system of effective evaluation. Key groups to consider in the design of training programs are:

Administrators - By virtue of their leadership roles, administrators must be considered key personnel in instituting change. They will want to know of needs of the district's students and possible solutions, as well as legal and financial constraints. Presentations to administrators may be on a one-to-one basis or in meetings such as administrative meetings or Governing Board meetings.

Faculty - Learning Services' programs are presenting faculty with students that were previously excluded from classes. It is therefore important that faculty feel supported, know about services, and know where to get questions answered. Although group in-service training will be planned, much of the in-service for faculty will be done on a one-to-one basis while helping them solve student problems.

Learning Services' Staff/Paraprofessionals - Meeting the needs of students with limitations means using various combinations of student aides, paraprofessionals, and professionals. Both one-to-one and group discussion of problems, solutions, and ethics will be helpful in presenting quality services. This group also can provide special insights and evaluation of needs and effectiveness from their one-to-one involvements and perspectives.

Classified Staff - Community Services staff, job developers, campus police, as well as many other classified staff, are critical resources for students. Sensitivity of classified staff to problems and awareness of solutions is imperative. It is appropriate to include them in plans for group in-service sessions, as well as providing them information on an as-needed basis.

Community - The success of students with limitations is often dependent on the cooperation of several community agencies. It is important that agencies such as The Department of Rehabilitation, Local rehabilitation hospitals, transit systems, and Adult Education as well as high school counselors have a good understanding of the services and programs available at the college.

Methods for Designing In-Service Training Sessions

In-service programs will be carefully designed to assure the successful and efficient dissemination of information and the creation of a heightened sensitivity to and awareness of functional limitations. Sessions will be directed toward meeting specific needs of the staff and/or students. The cooperation of teachers, administrators, aides and agencies will be elicited not only in preparation of specific short-term goals and immediate problems solution, but in the establishment of a program of extended learning opportunities. Cooperation acts not only to insure the successful presentation of a training package, but also, for carryover of information into the specific components for which the training was designed.

A program which provides for continuous and extended training is of great value. Factors which are indicative of the need for on-going training are:

1. Obsolete Information - Student populations and ways of approaching the problems are constantly changing. If teachers are to be kept abreast with the current growth, the education and training process must be constantly recycled.

2. Ineffective Training - Ideally,all in-service programs are effective; realistically, sessions sometimes fail. If one session has not fulfilled the preceived need, then a new approach and a second attempt to impart the necessary knowledge and/or skill must be undertaken after a thorough evaluation as to why you failed the first time.

3. Continual Turnover of Personnel - In today's society people do not always remain in the same locality, let alone in the same job placement. The use of large numbers of student aides to provide support services means everchanging staff. Continual training is vital to maintain quality of services and efficiency levels.

Steps involved in the development of training modules are:

1. Ascertain needs and establish priorities
2. Whenever possible, have trainees provide suggestions to assist in the program planning.
3. Identify a single need for each session and fill it.
4. Use behavioral objectives to accomplish your goal.
5. Provide adequate backup for carrying out new ideas or skills that have been learned.
6. Make the presentation interesting. Provide for changes in tempo and a variety of learning styles.
7. Evaluate each session.
8. Evaluate results of training as exhibited by later actions of participants.
9. Utilize evaluation information in preparing future training sessions. If possible, videotape sessions and rerun.
10. Bring in knowledgeable speakers with practical experience.

Evaluation Plan

The evaluation plan will include two major components, 1) an evaluation of the system of providing instruction and support services for students with special needs, and 2) an evaluation of each component of the screening/diagnosis/ and problem solving process. Evaluation will be tied to program objectives, (refer to section on Goals and Objectives) and will be composed of a written report and statistical information.

The Learning Services Co-ordinator will evaluate the college system for providing screening/diagnosis and problem solutions In evaluation of the system, two questions must be answered:

1) Are the needs of special students being met on campus?
2) Are these needs being met within an appropriate time frame?

To evaluate the diagnostic system, we will ask for an evaluation of diagnostic procedures from the appropriate departments within the college. Contact hours of professionals will be collected. A periodic review will indicate if there are unmet needs requiring additional diagnostic services.

To evaluate the referral system, we will request from a periodic sampling of students an evaluation asking: 1) Were you referred properly? and 2) Was the referral timely and efficient?

Each component of the screening/diagnosis and problem solution process will be responsible for evaluating their services. That evaluation (refer to section on Goals and Objectives) will describe or measure the effectiveness of:

1) Professional activity - judged by peers
2) Materials
3) Equipment
4) Information/Training
5) Quality of Instruction/Counseling
6) Effectiveness of Instruction/Counseling

The effectiveness of the program or service will be measured by:

1) Student outcomes
2) Accessibility of service
3) Number of students served
4) Availability of equipment
5) Individual student contact hours

The appropriateness of the instruction/counseling provided in each program or service will be ascertained by reviewing:

1) Goals and objectives of each program or service
2) Age levels of students served in each program or service
3) Use of information (confidentiality)

The organization of each program or service will be accomplished by requesting student evaluation of the following:

1) Accessibility of services
2) Accessibility of personnel
3) Responsiveness to student needs

And a review of the following:

1) Utilization of personnel/equipment
2) Job-related job descriptions for personnel
3) Flexibility to changing needs and population

A written report evaluating both the system and its components will be prepared in June to fit the format to be supplied by the Chancellor's Office.

BUDGET SUMMARY

The budget is based upon projected service to 275 students.

Analysis of students populations to be served in Individual Programs.

Counselor/Enabler	165
Speech	65
Learning Disabilities	47
Adaptive Physical Education	25
TOTAL	302
ADJUSTED TOTAL	275*

* Projected income must be based upon the number of functionally limited students enrolled for services at West Valley College. Although some students receive special services in several programs, there can be no duplication of funding.

INCOME RESOURCES

AB 77	
275(each student generates $785 excess cost money)	$ 215,875
VEA	17,000
PROJECTED INCOME TOTAL	$ 232,875

PROGRAM EXPENSES

Counselor/Enabler	120,549
Speech	41,761
Learning Disabilities	37,767
Adaptive Physical Education	3,564
PROJECTED EXPENSE TOTAL	$ 203,641

COUNSELING

It is the function of the Counselor/Enabler to mediate between limited physiological and psychological functioning and the functioning required to carry out individual educational objectives. Barriers caused by physical problems, emotional adjustment, and a lack of information and understanding between faculty and student are addressed. Items also appear in this section for the collecting and maintaining of required diagnostic and medical information, the maintenance or proper audit trails, development and filing of required reports and program planning:

Personnel	
Counselor/Enabler, . , ... Selleck	17,735
Counselor - new position requested......... If not shown as new position, this counseling needs to be converted to hourly.	18,000
Hourly Counseling.......................... (6 hr per wk x 38 wk @ 16.00 per wk)	3,648
Student Personnel Clerk I..................	8,724
Consultant Services........................	4,000
Operating Expences	
Equipment	
Calculator............................... Rockwell, 455 P	490
Travel expenses	
Mileage................................	500
Conferences............................	600
Office supplies........................	100
Program Total	53,797

SUPPORTIVE SERVICES

For handicapped students to compete on an equal basis in classes, Support Services such as notetakers, interpreters, adaptive equipment, transportation, mobility assistance, etc., is required. Without Support Services students would not be able to compete or would be eliminated from education because they cannot get there, cannot turn pages in a book, or any one of thousands of solvable problems. These services support students in classes through out all divisions of the school.

Personnel

Program Assistant........................	$11,253
Instructional	
Contract for Services Rendered....... Notetakers are paid on a per semester basis.	3,375
Aides .... Readers 10 hr x 34 wk @ 2.75 x 5 students ($4,400) Tutors 15 hr x 42 wk @ 2.75 ($1,732) Interpreters 15 hr per wk x 34 wk x 3 students @ 6.50 per hr ($9,945)	16,473

SUPPORTIVE SERVICES (Continued)

Test Procters 4 hr per wk x 36 wk @ 2.75 per hr ($ 396)	
Non-instructional	
Van Driver (New fulltime position)..... 10 mths @ 597 per mth	5,970
Hourly non-instructional aides......... Van, tram, mobility assistance, transferring students	13,843
Operating expenses	
Equipment to be specified................ Equipment to overcome student problems as they arise. Cannot be itemized ahead because we do not know what disabilities on problems students will have a year in advance. (re-embursable)	2,000
Instructional supplies.................... Supplies to provide instructional aide as problems arise for students.	1,000
Information Bank	
Material..................................	1,500
Information Assistant.................... (5 hr x 34 x 170 x 3.75) Self counseling material so students and staff can investigate adaptive aids, how to convert a kitchen for a wheelchair, where to get braille watches. etc..	553
Operating expenses	
Equipment purchase......................	2,000
Supplies (office).......................	300
Program Total	58,267

VOCATIONAL

We are perfecting our services that allow increasing numbers of handicapped students to take advantage of West Valley's educational opportunities. Special assistance is needed for these students to move on from West Valley College into the employment market. Persons with limited functions are often restricted from employment opportunities. Movement of these students out into the employment community is going to require special planning and development, as well as assistance to the employer and student during the adjustment period. The following are budgeted items to identify and develop ways of eliminating barriers to employment and developing job placement for students with functioning limitations:

Personnel	
Hourly classified................ (15hr x44wk = 660hr x 4.75 per hr) To do job development, placement and follow-up during employer and student adjustment period.	3,135
Consultant services.................. To help with problem clarification and solution approaches.	2,000
Operating Expenses	
Travel...........................	600
Supplies..........................	100
Program Total	$ 5,835

RECRUITING AND COMMUNITY LIASON

The solving of complex problems of students with functional limitations cannot be done by the college as an isolated body. Liason between student, community and programs is important. Community agencies and prospective student must know what is available on West Valley's campus so appropriate referrals can be made. If properly informed, community agencies can help with testing, screening and the providing of supplemental services. For students with limitations to function well in school, it is often necessary for the school to serve as advocate to solve problems outside and obtain necessary supplemental aid. The following budget items are to accomplish the above:

Personnel

Consultant.............................. (to help with in-service training)	1,800

Operating Expenses

Printing.............................. (brochures)	500
Supplies..............................	150
Transportation........................	200
Program Total	2,650

LEARNING EFFICIENCY ASSISTANCE PROGRAM (LEAP)

The LEAP program will provide students with assessments of their skills, a survey of the college's educational resources, and individual programs to ameliorate or remediate their special needs in learning. The program will be multi-disciplinary in approach, using counseling, speech/hearing, psychology, English, Math and other services and agencies to provide the students with an effective analysis of their learning dynamics. The program will then provide the student with educational resources such as individual learning programs and recommendations for college courses that could help to expand his or her potential as a human being. Individual and small group sessions for learning will be utilized.

Personnel	
Learning Specialist Peck	$19,543.00
Hourly - Learning Specialist 12 hours/week for 36 weeks @ $16.00	6,912.00
Instructional Aides 54 hours/week for 36 weeks at $3.25/hour	6,318.00
Tutors 36 hours/week for 36 weeks at $2.75/hour	3,564.00
Operating Expenses	
Conference	100.00
Mileage, Travel Expenses	150.00
Instructional Supplies	600.00
Equipment	480.00
	$37,667.00

SPEECH/LANGUAGE/HEARING PROGRAM

The Speech/Language/Hearing Program provides special assistance on an individual and/or small group basis to students with speech, language and hearing deficits. The three components of the program cover articulation and production, stuttering, voice problems, oral English/ second language, language for aphasics, lipreading, auditory training and hearing testing.

The program goals are to provide direct, intensive and individualized clinical services to effect positive changes in the communication behavior and to provide information and assistance to other disciplines.

Personnel	
Speech Pathologist	
Price	$17,099.00
Hourly - Speech Pathologist	
16 hours/week for 36 weeks at $16.00/hour	9,216.00
Hourly - Audiologist	
16 hours/week for 36 weeks at $16.00/hour	9,216.00
Instructional Aides	
36 hours/week for 36 weeks at $3.25/hour	4,212.00
Operating Expenses	
Instructional Supplies	1,768.00
Conference	100.00
Mileage, Travel Expenses	150.00
	$41,761.00

ADAPTIVE P.E.

The Physical Education Department offers classes that allow persons with limited functioning to increase physical capacity, increase endurance and develop coordination. To work in that class, some students require the assistance of an instruction aide or special equipment. Following are the budget items needed to provide this to students:

Personnel

Instructional Aides.................. (1,296 hours at $2.75/hr)	3,564.00

Operating Expenses

Equipment............................	500.00
Program Total	4,064.00

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